



SAR Test Report

Report No.: STS2601435H02

Issued for

HONG KONG LELEGAO TECHNOLOGY CO., LIMITED

19H Maxgrand Plaza, No.3 Tai Yau Street, San Po Kong,
Kowloon, HongKong

Product Name: Smart Phone

Brand Name: Blackview

Model Name: FORT 200

Series Model(s): N/A

FCC ID: 2BSW8-FORT200

Test Standard: ANSI/IEEE Std. C95.1
FCC 47 CFR Part 2 (2.1093)
IEEE Std. 1528-2013

Head: 0.738 W/kg

Max. Report SAR (1g) Body: 0.748 W/kg

Limb: 1.851 W/kg

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Shenzhen STS Test Services Co., Ltd.

**TEST REPORT CERTIFICATION****Applicant's name** : HONG KONG LELEGAO TECHNOLOGY CO.,LIMITEDAddress : 19H Maxgrand Plaza, No.3 Tai Yau Street, San Po Kong,
Kowloon, HongKong**Manufacturer's Name** : Shenzhen Doke Electronic Co., LTDAddress : 801, Building3, 7th Industrial Zone, Yulv Community, Yutang
Road, Guangming District, Shenzhen, China**Product description**

Product name : Smart Phone

Brand name : Blackview

Model name : FORT 200

Series Model..... : N/A

ANSI/IEEE Std. C95.1

Standards : FCC 47 CFR Part 2 (2.1093)

IEEE Std. 1528-2013

The device was tested by Shenzhen STS Test Services Co., Ltd. in accordance with the measurement methods and procedures specified in KDB 865664 The test results in this report apply only to the tested sample of the stated device/equipment. Other similar device/equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Date of Test..... :

Date (s) of performance of tests..... : 23 Feb. 2026 ~ 28 Feb. 2026

Date of Issue..... : 10 Mar. 2026

Test Result..... : **Pass**

Testing Engineer : _____

(Xin.Liu)

Technical Manager : _____

(Shifan. Long)

Authorized Signatory : _____

(Bovey Yang)





Table of Contents

1. General Information	5
1.1 EUT Description	5
1.2 Test Environment	7
1.3 Test Factory	7
2. Test Standards and Limits	8
3. SAR Measurement System	9
3.1 Definition of Specific Absorption Rate (SAR)	9
3.2 SAR System	9
4. Tissue Simulating Liquids	12
4.1 Simulating Liquids Parameter Check	12
5. SAR System Validation	16
5.1 Validation System	16
5.2 Validation Result	16
6. SAR Evaluation Procedures	17
7. EUT Antenna Location Sketch	18
7.1 SAR test exclusion consider table	19
8. EUT Test Position	22
8.1 Define Two Imaginary Lines on the Handset	22
8.2 Hotspot mode exposure position condition	23
9. Uncertainty	24
9.1 Measurement Uncertainty	24
10. Conducted Power Measurement	27
10.1 Test Result	27
11. EUT and Test Setup Photo	51
11.1 EUT Photo	51
11.2 Setup Photo	54
12. SAR Result Summary	60
12.1 Head SAR	60
12.2 Body-worn and Hotspot SAR	62
12.3 Limb-worn and Hotspot SAR	64
12.4 Simultaneous Multi-band Transmission Evaluation	66
13. Equipment List	69
Appendix A. System Validation Plots	70
Appendix B. SAR Test Plots	86
Appendix C. Probe Calibration and Dipole Calibration Report	170

**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	10 Mar. 2026	STS2601435H02	ALL	Initial Issue



1. General Information

Environmental evaluation measurements of specific absorption rate (SAR) distributions in emulated human head and body tissues exposed to radio frequency (RF) radiation from wireless portable devices for compliance with the rules and regulations of the U.S. Federal Communications Commission (FCC).

1.1 EUT Description

Product Name	Smart Phone				
Brand Name	Blackview				
Model Name	FORT 200				
Series Model	N/A				
Model Difference	N/A				
Sample number	260130006-1				
Battery	Model: LiFHPS496487PFH Rated Voltage: 3.87V Charge Limit Voltage: 4.45 V Capacity: 5000mAh				
Device Category	Portable				
Product stage	Production unit				
RF Exposure Environment	General Population / Uncontrolled				
Hardware Version	E5J7_MAIN_PCB_V1.1				
Software Version	FORT_200_NEU_E5J7_V1.0_A16_01_20260107V01				
Frequency Range	GSM 850: 824 MHz ~ 849 MHz PCS1900: 1850 MHz ~ 1910 MHz WCDMA Band 2: 1850 MHz ~ 1910 MHz WCDMA Band 4: 1710 MHz ~ 1755 MHz WCDMA Band 5: 824 MHz ~ 849 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 5: 824 MHz ~ 849 MHz LTE Band 7: 2500 MHz ~ 2570 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 17 (704-716 MHz) is covered by LTE Band 12 (699-716 MHz) LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 4 (1710-1755 MHz) is covered by LTE Band 66 (1710-1780 MHz) WLAN 802.11b/g/n20: 2412 MHz ~ 2462 MHz WLAN 802.11n40: 2422 MHz ~ 2452 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5150 ~ 5250 MHz WLAN 802.11a/n20/n40/ac20/ac40/ac80: 5725 ~ 5850 MHz Bluetooth: 2402 MHz to 2480 MHz				
Max. Reported SAR(1g): Test distance: Head:0mm Body:10mm Limb:0mm	Band	Mode	Head (W/kg)	Body Worn and Hotspot(W/kg)	Limb Worn and Hotspot(W/kg)
	PCE	GSM 850	0.182	0.136	0.426
	PCE	GSM 1900	0.049	0.095	0.605
	PCE	WCDMA Band 2	0.044	0.292	1.851
	PCE	WCDMA Band 4	0.689	0.205	0.236
	PCE	WCDMA Band 5	0.117	0.140	0.415
	PCE	LTE Band 2	0.043	0.253	1.444
	PCE	LTE Band 5	0.637	0.189	1.035
	PCE	LTE Band 7	0.135	0.748	1.007



	PCE	LTE Band 12/17	0.128	0.163	0.487
	PCE	LTE Band 41	0.053	0.716	0.631
	PCE	LTE Band 66/4	0.556	0.178	0.432
	DTS	2.4G WLAN	0.035	0.099	0.107
	DSS	BT ^{NOTE}	0.084	0.017	0.084
	NII	5.2G WLAN	0.269	0.311	0.416
	NII	5.8G WLAN	0.249	0.195	0.417
1-g Sum SAR			1.007	1.059	2.268
Limit:			1.6W/kg	1.6W/kg	4.0W/kg
FCC Equipment Class	Licensed Portable Transmitter Held to Ear (PCE) Part 15 Spread Spectrum Transmitter (DSS) Digital Transmission System (DTS) Unlicensed National Information Infrastructure TX(NII)				
Operating Mode:	GSM: GSM Voice; GPRS/EGPRS Class 12 WCDMA: RMC, HSDPA, HSUPA Release 6 LTE: QPSK, 16QAM 2.4G WLAN : 802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM 5G WLAN: 802.11a(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM 802.11ac(OFDM):BPSK,QPSK,16-QAM,64-QAM,256-QAM Bluetooth: GFSK + $\pi/4$ DQPSK+8DPSK BLE: GFSK				
Antenna Specification:	GSM/WCDMA/LTE: PIFA Antenna Bluetooth: PIFA Antenna WLAN: PIFA Antenna				
SIM Card	Support dual-SIM, dual standby, the multiple SIM card with two lines cannot transmitting at the same time				
Hotspot Mode	Support				
DTM Mode	Not Support				
Note: 1. The dual SIM card mobile has 2 SIM slots and supports dual SIM dual standby. The WWAN radio transmission will be enabled by either one SIM at a time (Single active) 2. After pre-scan two SIM cards power, we found test result of the SIM1 was the worse, so we chose SIM1 card to perform all tests. 3. The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power					



1.2 Test Environment

Ambient conditions in the SAR laboratory:

Items	Required
Temperature (°C)	18-25
Humidity (%RH)	30-70

1.3 Test Factory

ShenZhen STS Test Services Co.,Ltd.

A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration No.: 625569

IC Registration No.: 12108A

A2LA Certificate No.: 4338.01



2. Test Standards and Limits

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	IEEE Std C95.1, 2019	IEEE Standard for Safety Levels with Respect to Human Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz. It specifies the maximum exposure limit of 1.6 W/kg as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.
3	IEEE Std. 1528-2013	Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
4	FCC KDB 447498 D04 v01	RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices
5	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
6	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
7	FCC KDB 941225 D01 v03r01	SAR Measurement Procedures for 3G Devices
8	FCC KDB 941225 D05 v02r05	SAR for LTE Devices
9	FCC KDB 941225 D06 v02r01	Hotspot Mode SAR
10	FCC KDB 648474 D04 v01r03	SAR Evaluation Considerations for Wireless Handsets
11	FCC KDB 248227 D01 Wi-Fi SAR v02r02	SAR Considerations for 802.11 Devices

(A). Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

(B). Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

NOTE: Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1 gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

Population/Uncontrolled Environments:

Are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

Occupational/Controlled Environments:

Are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure, (i.e. as a result of employment or occupation).

NOTE

GENERAL POPULATION/UNCONTROLLED EXPOSURE

PARTIAL BODY LIMIT

1.6 W/kg

3. SAR Measurement System

3.1 Definition of Specific Absorption Rate (SAR)

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$SAR = \frac{d}{dt} \left(\frac{dW}{dm} \right) = \frac{d}{dt} \left(\frac{dW}{\rho dv} \right)$$

SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

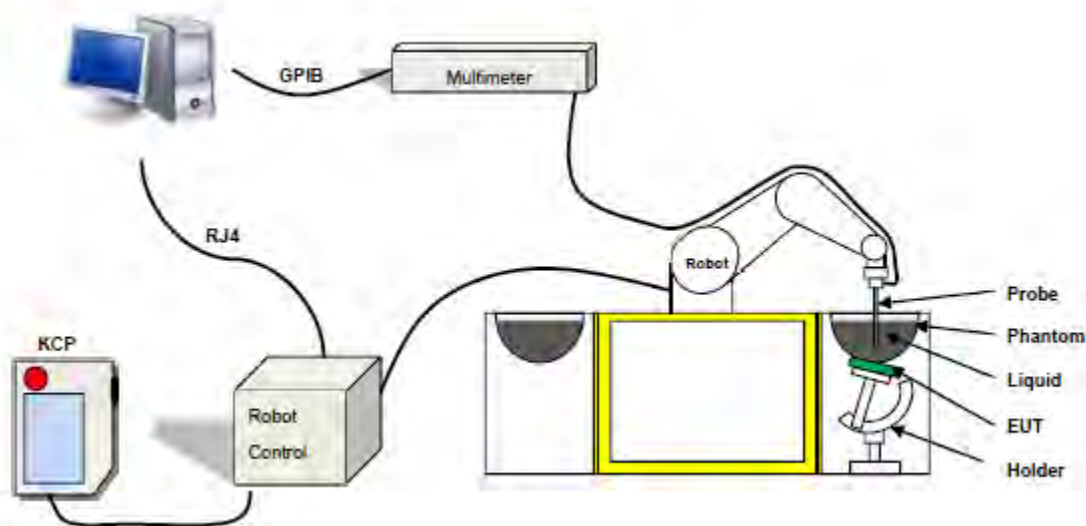
$$SAR = \frac{\sigma E^2}{\rho}$$

Where: σ is the conductivity of the tissue,

ρ is the mass density of the tissue and E is the RMS electrical field strength.

3.2 SAR System

MVG SAR System Diagram:



COMOSAR is a system that is able to determine the SAR distribution inside a phantom of human being according to different standards. The COMOSAR system consists of the following items:

- Main computer to control all the system
- 6 axis robot
- Data acquisition system
- Miniature E-field probe
- Phone holder
- Head simulating tissue

The following figure shows the system.



The EUT under test operating at the maximum power level is placed in the phone holder, under the phantom, which is filled with head simulating liquid. The E-Field probe measures the electric field inside the phantom. The Open SAR software computes the results to give a SAR value in a 1g or 10g mass.

3.2.1 Probe

For the measurements the Specific Dosimetric E-Field Probe SN 08/21 EPGO352 with following specifications is used

- Probe Length: 330 mm
- Length of Individual Dipoles: 2 mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter: 2.5 mm
- Distance between dipole/probe extremity: 1 mm
- Dynamic range: 0.01-100 W/kg
- Probe linearity: 3%
- Axial Isotropy: < 0.10 dB
- Spherical Isotropy: < 0.10 dB
- Calibration range: 150 MHz to 6 GHz for head & body simulating liquid.
- Angle between probe axis (evaluation axis) and surface normal line: less than 30°



Figure 1-MVG COMOSAR Dosimetric E field Dipole

3.2.2 Phantom

For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.

SN 32/14 SAM115



Figure-SN 21/21 ELLI48



3.2.3 Device Holder



The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5 mm distance, a positioning uncertainty of ± 0.5 mm would produce a SAR uncertainty of ± 20 %. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.



4. Tissue Simulating Liquids

4.1 Simulating Liquids Parameter Check

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine if the dielectric parameters are within the tolerances of the specified target values

The uncertainty due to the liquid conductivity and permittivity arises from two different sources. The first source of error is the deviation of the liquid conductivity from its target value (max _ 5 %) and the second source of error arises from the measurement procedures used to assess conductivity. The uncertainty shall be assessed using a rectangular probability For 1 g averaging, the maximum weighting coefficient for SAR is 0,5.

IEEE SCC-34/SC-2 RECOMMENDED TISSUE DIELECTRIC PARAMETERS

The head and body tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 have been incorporated in the following table.

Frequency	ϵ_r	σ 10g S/m
300	45.3	0.87
450	43.5	0.87
750	41.9	0.89
835	41.5	0.90
900	41.5	0.97
1450	40.5	1.20
1800 to 2000	40.0	1.40
2100	39.8	1.49
2450	39.2	1.80
2600	39.0	1.96
3000	38.5	2.40
3500	37.9	2.91
4000	37.4	3.43
4500	36.8	3.94
5000	36.2	4.45
5200	36.0	4.66
5400	35.8	4.86
5600	35.5	5.07
5800	35.3	5.27



The following table gives the recipes for tissue simulating liquid and the theoretical Conductivity/Permittivity.

Head (Reference IEEE1528)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ϵ
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.4	40.0
2450	55.0	0	0	0.1	0	44.9	1.80	39.2
2600	54.9	0	0	0.1	0	45.0	1.96	39.0
Frequency (MHz)	Water (%)	Hexyl Carbitol (%)			Triton X-100 (%)		Conductivity σ (S/m)	Permittivity ϵ
5200	62.52	17.24			17.24		4.66	36.0
5800	62.52	17.24			17.24		5.27	35.3
Body (From instrument manufacturer)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ϵ
750	51.7	47.2	0	0.9	0.1	0	0.96	55.5
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
900	50.8	48.2	0	0.9	0.1	0	1.05	55.0
1800, 1900, 2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0.1	0	31.3	1.95	52.7
2600	68.2	0	0	0.1	0	31.7	2.16	52.5
Frequency(MHz)	Water	DGBE (%)			Salt (%)		Conductivity σ (S/m)	Permittivity ϵ
5200	78.60	21.40			/		5.30	49.00
5800	78.50	21.40			0.1		6.00	48.20

**LIQUID MEASUREMENT RESULTS**

Date	Ambient		Simulating Liquid		Parameters	Target	Measured	Deviation %	Limited %
	Temp. [°C]	Humidity %	Frequency (MHz)	Temp. [°C]					
2026-02-23	21.4	53	707.5	21.1	Permittivity	42.13	43.05	2.19	±5
					Conductivity	0.89	0.88	-0.81	±5
2026-02-23	21.5	53	711	21.2	Permittivity	42.11	43.30	2.83	±5
					Conductivity	0.89	0.90	1.42	±5
2026-02-23	21.5	54	750	21.2	Permittivity	41.90	42.65	1.79	±5
					Conductivity	0.89	0.91	2.25	±5
2026-02-24	20.2	44	829	19.9	Permittivity	41.53	42.55	2.46	±5
					Conductivity	0.90	0.88	-2.15	±5
2026-02-24	20.2	44	835	19.9	Permittivity	41.50	41.14	-0.87	±5
					Conductivity	0.90	0.88	-2.22	±5
2026-02-24	20.2	44	836.6	19.9	Permittivity	41.49	41.73	0.57	±5
					Conductivity	0.90	0.90	-0.02	±5
2026-02-24	20.3	44	844	20.0	Permittivity	41.46	41.90	1.07	±5
					Conductivity	0.90	0.88	-2.34	±5
2026-02-24	20.2	44	848.8	19.9	Permittivity	41.44	41.47	0.08	±5
					Conductivity	0.90	0.92	2.04	±5
2026-02-24	20.2	45	850	19.9	Permittivity	41.43	41.44	0.03	±5
					Conductivity	0.90	0.88	-2.41	±5
2026-02-25	21.1	57	1712.6	20.8	Permittivity	40.12	40.06	-0.16	±5
					Conductivity	1.35	1.37	1.48	±5
2026-02-25	21.1	57	1720	20.8	Permittivity	40.11	40.08	-0.09	±5
					Conductivity	1.35	1.33	-1.79	±5
2026-02-25	21.2	58	1740	20.8	Permittivity	40.09	40.08	-0.01	±5
					Conductivity	1.37	1.37	0.31	±5
2026-02-25	21.3	58	1752.4	21.0	Permittivity	40.07	39.49	-1.44	±5
					Conductivity	1.37	1.37	-0.20	±5
2026-02-25	21.2	57	1800	20.9	Permittivity	40.00	40.88	2.20	±5
					Conductivity	1.40	1.39	-0.71	±5
2026-02-26	22.9	56	1850.2	22.6	Permittivity	40.00	40.13	0.33	±5
					Conductivity	1.40	1.42	1.43	±5
2026-02-26	23.0	56	1900	22.7	Permittivity	40.00	41.09	2.73	±5
					Conductivity	1.40	1.41	0.71	±5
2026-02-26	23.1	57	1907.6	22.8	Permittivity	40.00	40.45	1.13	±5
					Conductivity	1.40	1.41	0.71	±5



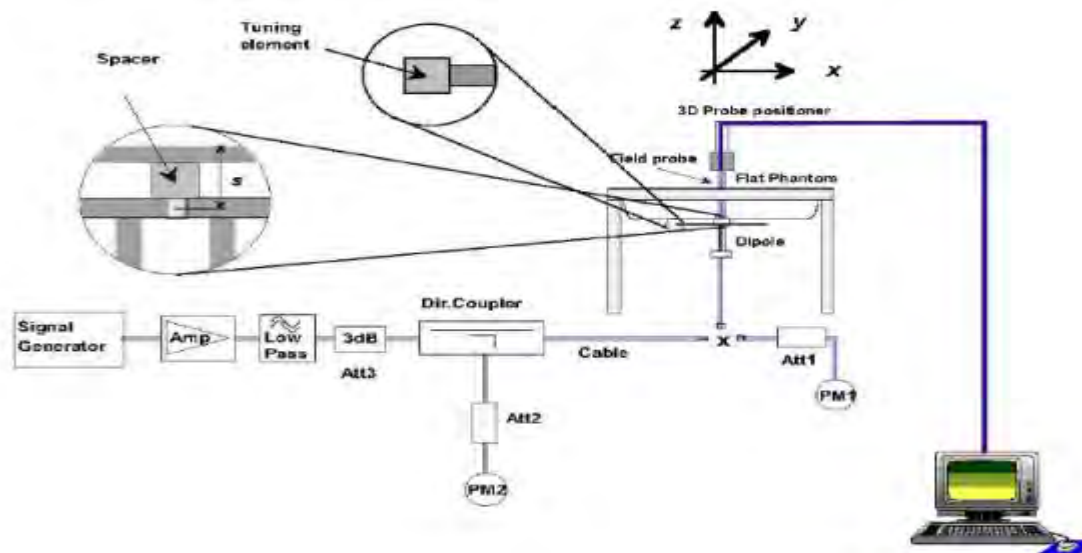
2026-02-27	23.4	60	2450	23.1	Permittivity	39.20	39.39	0.48	±5
					Conductivity	1.80	1.78	-1.11	±5
2026-02-27	23.4	60	2462	23.1	Permittivity	39.18	39.26	0.21	±5
					Conductivity	1.81	1.81	-0.04	±5
2026-02-27	23.4	60	2510	23.1	Permittivity	39.12	39.92	2.04	±5
					Conductivity	1.86	1.88	0.86	±5
2026-02-27	23.4	60	2535	23.1	Permittivity	39.09	39.62	1.36	±5
					Conductivity	1.89	1.89	-0.04	±5
2026-02-27	23.4	60	2560	23.1	Permittivity	39.05	39.75	1.78	±5
					Conductivity	1.92	1.91	-0.38	±5
2026-02-27	23.4	60	2593	23.1	Permittivity	39.01	39.36	0.90	±5
					Conductivity	1.95	1.96	0.38	±5
2026-02-27	23.4	60	2600	23.1	Permittivity	39.00	39.07	0.18	±5
					Conductivity	1.96	1.99	1.53	±5
2026-02-28	22.1	60	5200	21.8	Permittivity	36.00	35.79	-0.58	±5
					Conductivity	4.66	4.67	0.21	±5
2026-02-28	22.2	60	5240	22.0	Permittivity	35.96	36.20	0.67	±5
					Conductivity	4.70	4.70	-0.04	±5
2026-02-28	22.2	60	5800	22.0	Permittivity	35.30	35.80	1.42	±5
					Conductivity	5.27	5.26	-0.19	±5
2026-02-28	22.2	60	5825	22.0	Permittivity	35.28	36.18	2.57	±5
					Conductivity	5.30	5.27	-0.50	±5

5. SAR System Validation

5.1 Validation System

Each MVG system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the MVG software, enable the user to conduct the system performance check and system validation. System kit includes a dipole, and dipole device holder.

The system check verifies that the system operates within its specifications. It's performed daily or before every SAR measurement. The system check uses normal SAR measurement in the flat section of the phantom with a matched dipole at a specified distance. The system validation setup is shown as below.



5.2 Validation Result

Date	Frequency (MHz)	Power	SAR _{1g} (W/Kg)	SAR _{10g} (W/Kg)	Drift (%)	1W Target		Difference percentage		Limited %
						SAR _{1g} (W/Kg)	SAR _{10g} (W/Kg)	1g	10g	
2025-02-23	750	100 mW	0.894	0.540	1.90	8.49	5.53	5.30%	-2.35%	10
		Normalize to 1 Watt	8.94	5.40						
2025-02-24	835	100 mW	0.990	0.613	-2.08	9.63	6.15	2.80%	-0.33%	10
		Normalize to 1 Watt	9.90	6.13						
2025-02-25	1800	100 mW	3.812	2.053	0.01	37.95	20.49	0.45%	0.20%	10
		Normalize to 1 Watt	38.12	20.53						
2025-02-26	1900	100 mW	3.949	2.012	-0.80	39.84	20.20	-0.88%	-0.40%	10
		Normalize to 1 Watt	39.49	20.12						
2025-02-27	2450	100 mW	5.427	2.373	-3.07	54.70	24.11	-0.79%	-1.58%	10
		Normalize to 1 Watt	54.27	23.73						
2025-02-27	2600	100 mW	5.586	2.448	-0.86	56.19	24.08	-0.59%	1.66%	10
		Normalize to 1 Watt	55.86	24.48						
2025-02-28	5200	10 mW	1.588	0.596	1.85	163.88	57.29	-3.12%	4.07%	10
		Normalize to 1 Watt	158.77	59.62						
2025-02-28	5800	10 mW	1.846	0.683	-3.58	188.95	63.45	-2.28%	7.60%	10
		Normalize to 1 Watt	184.64	68.27						

Note:

(1) We use a CW signal of 20dBm(750/835/1800/1900/2450/2600MHz) and 10dBm(5000-6000MHz) for system check, and then all SAR values are normalized to 1W forward power. The result must be within $\pm 10\%$ of target value.



6. SAR Evaluation Procedures

The procedure for assessing the average SAR value consists of the following steps:

The following steps are used for each test position

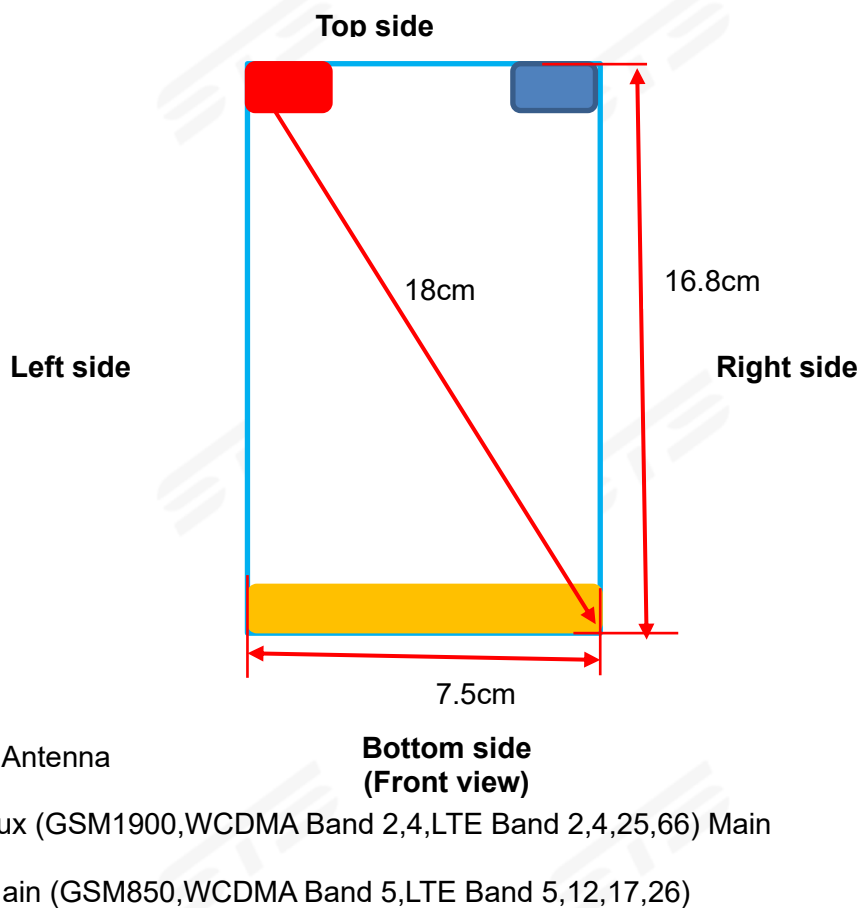
- Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme.
- Around this point, a cube of 30 * 30 * 30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8*4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

➤ Area Scan& Zoom Scan

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01 quoted below. When the 1-g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

7. EUT Antenna Location Sketch

It is a Smart phone, support GSM/WCDMA/LTE/WLAN/BT mode.



Antenna Separation Distance(cm)						
ANT	Back Side	Front Side	Left Side	Right Side	Top Side	Bottom Side
WLAN/BT	≤0.5	≤0.5	6.5	≤0.5	≤0.5	16
WWAN-Main	≤0.5	≤0.5	1	1	16	≤0.5
WWAN-Aux	≤0.5	≤0.5	≤0.5	6.5	≤0.5	16

Note 1: The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report.



7.1 SAR test exclusion consider table

The WWAN/WLAN/BT SAR evaluation of Maximum power (dBm) summing tolerance.

Exposure Position	Wireless Interface	GSM850	PCS1900	WCDMA 2	WCDMA 4	WCDMA 5	LTE Band 2	LTE Band 4	LTE Band 5
	Calculated Frequency(GHz)	0.8488	1.8502	1.9076	1.74	0.8366	1.9	1.7325	0.829
	Maximum Turn-up power (dBm)	30	27	24	24	24	25	25	24.5
	Maximum rated power(mW)	1000.00	501.19	251.19	251.19	251.19	316.23	316.23	281.84
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Back Side	exclusion threshold(mW)	9.04	3.44	3.35	3.30	6.49	3.36	3.62	9.34
	Testing required?	YES	YES	YES	YES	YES	YES	YES	YES
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Front Side	exclusion threshold(mW)	9.04	3.44	3.35	3.30	6.49	3.36	3.62	9.34
	Testing required?	YES	YES	YES	YES	YES	YES	YES	YES
	Separation distance (cm)	1	0.5	0.5	0.5	1	0.5	0.5	1
Left Side	exclusion threshold(mW)	24.26	3.44	3.35	3.30	20.63	3.36	3.62	24.81
	Testing required?	YES	YES	YES	YES	YES	YES	YES	YES
	Separation distance (cm)	1	6.5	6.5	6.5	1	6.5	6.5	1
Right Side	exclusion threshold(mW)	24.26	386.38	383.51	423.17	20.63	383.88	392.62	24.81
	Testing required?	YES	YES	NO	NO	YES	NO	NO	YES
	Separation distance (cm)	16	0.5	0.5	0.5	16	0.5	0.5	16
Top Side	exclusion threshold(mW)	1260.00	3.44	3.35	3.30	2108.60	3.36	3.62	1234.83
	Testing required?	NO	YES	YES	YES	NO	YES	YES	NO
	Separation distance (cm)	0.5	16	16	16	0.5	16	16	0.5
Bottom Side	exclusion threshold(mW)	9.04	2029.05	2026.05	2327.00	6.49	2026.44	2035.52	9.34
	Testing required?	YES	NO	NO	NO	YES	NO	NO	YES

Exposure Position	Wireless Interface	LTE Band 7	LTE Band 12	LTE Band 17	LTE Band 41	LTE Band 66	NFC	BLE	2.4G WLAN	5.2G WLAN	5.8G WLAN
	Calculated Frequency(GHz)	2.56	0.704	0.709	2.593	1.72	0.01356	2.402	2.462	5.24	5.825
	Maximum Turn-up power (dBm)	25.5	24.5	24.5	25.5	25	-41.5	3.5	18	15	14
	Maximum rated power(mW)	354.81	281.84	281.84	354.81	316.23	0.00	2.24	63.10	31.62	25.12
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Back Side	exclusion threshold(mW)	2.65	11.75	11.63	2.62	3.64	176.28	2.79	2.73	1.49	1.37
	Testing required?	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES
	Separation distance (cm)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Front Side	exclusion threshold(mW)	2.65	11.75	11.63	2.62	3.64	176.28	2.79	2.73	1.49	1.37
	Testing required?	YES	YES	YES	YES	YES	NO	NO	YES	YES	YES
	Separation distance (cm)	0.5	1	1	0.5	0.5	3.5	6.5	6.5	6.5	6.5
Left Side	exclusion threshold(mW)	2.65	28.98	28.79	2.62	3.64	794.44	362.53	360.36	299.69	292.05
	Testing required?	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO
	Separation distance (cm)	6.5	1	1	6.5	6.5	3.5	0.5	0.5	0.5	0.5
Right Side	exclusion threshold(mW)	356.94	28.98	28.79	355.82	393.32	794.44	2.79	2.73	1.49	1.37
	Testing required?	NO	YES	YES	NO	NO	NO	NO	YES	YES	YES
	Separation distance (cm)	0.5	16	16	0.5	0.5	9.5	0.5	0.5	0.5	0.5
Top Side	exclusion threshold(mW)	2.65	1073.85	1080.37	2.62	3.64	1720.20	2.79	2.73	1.49	1.37
	Testing required?	YES	NO	NO	YES	YES	NO	NO	YES	YES	YES
	Separation distance (cm)	16	0.5	0.5	16	16	6.5	16	16	16	16
Bottom Side	exclusion threshold(mW)	1997.37	11.75	11.63	1996.14	2036.24	1282.52	2003.55	2001.16	1929.24	1919.37
	Testing required?	NO	YES	YES	NO	NO	NO	NO	NO	NO	NO

Note:

1. maximum power is the source-based time-average power and represents the maximum RF output power among production units.
2. Per KDB 447498 D04, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
3. Per KDB 447498 D04, if the maximum time-averaged power available does not exceed 1 mW. This stand-alone SAR exemption test.



4. Per KDB 447498 D04, the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

5. Per KDB 447498 D04, An alternative to the SAR-based exemption is using below table and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in below table to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

RF Source frequency (MHz)	Threshold ERP(watts)
0.3-1.34	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.



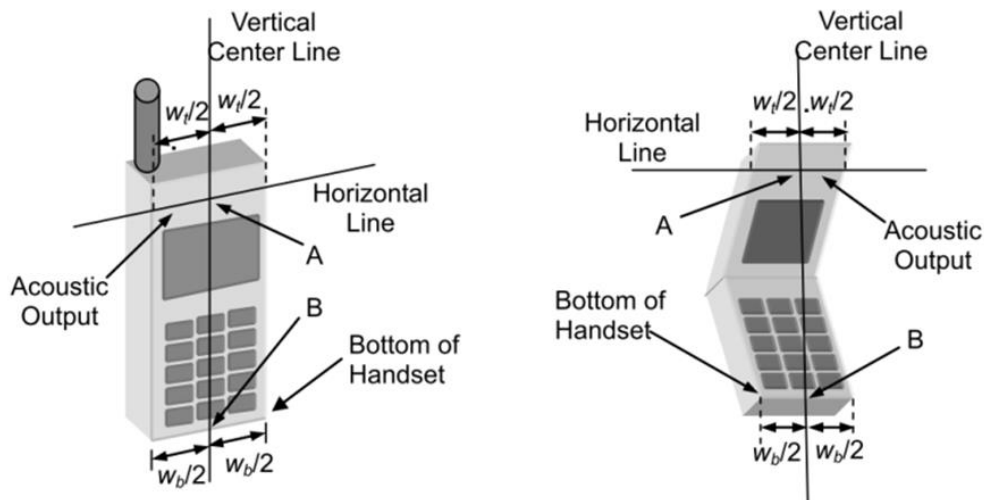
6. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion 8. for each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of each of these configurations is less than 1/4db higher than those measured at the lower data rate than 11b mode, thus the SAR can be excluded.
7. Per KDB 616217 D04, SAR evaluation for the front surface of tablet display screens are generally not necessary.

8. EUT Test Position

This EUT was tested in Right Cheek, Right Titled, Left Cheek, Left Titled, Front Face and Rear Face.

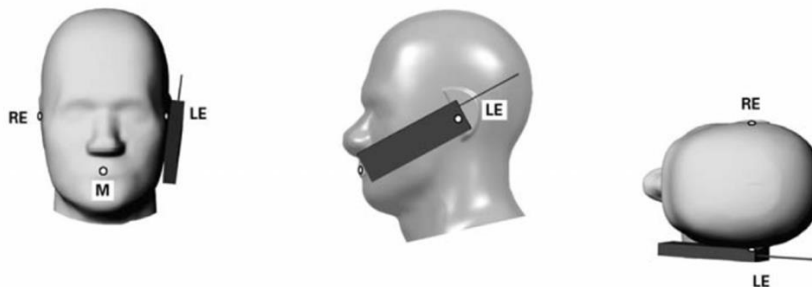
8.1 Define Two Imaginary Lines on the Handset

- (1) The vertical centerline passes through two points on the front side of the handset the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the handset.
- (2) The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
- (3) The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centerline is not necessarily to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.



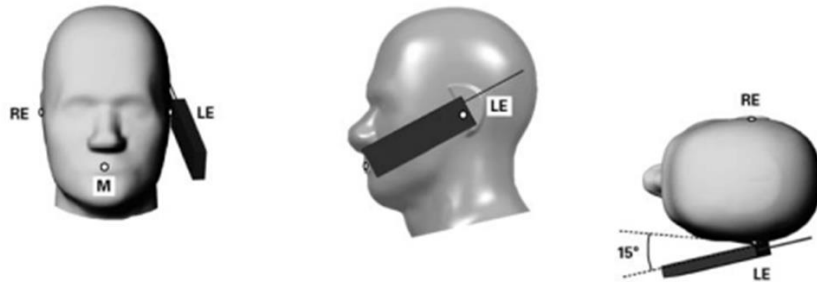
Cheek Position

- 1) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- 2) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost



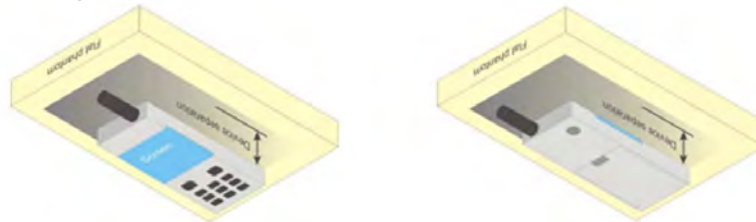
Title Position

- (1) To position the device in the “cheek” position described above.
- (2) While maintaining the device in the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until with the ear is lost.



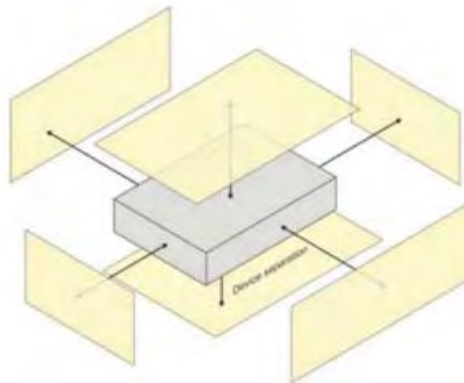
Body-worn Position Conditions:

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB Publication 447498 D04 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. When the same wireless transmission configuration is used for testing body-worn accessory and hotspot mode SAR, respectively, in voice and data mode, SAR results for the most conservative *test separation distance* configuration may be used to support both SAR conditions. When the *reported* SAR for a body-worn accessory, measured without a headset connected to the handset, is $> 1.2 \text{ W/kg}$, the highest *reported* SAR configuration for that wireless mode and frequency band should be repeated for the body-worn accessory with a headset attached to the handset.



8.2 Hotspot mode exposure position condition

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing function, the relevant hand and body exposure condition are tested according to the hotspot SAR procedures in KDB 941225. A test separation distance of 10 mm is required between the phantom and all surface and edges with a transmitting antenna located within 25 mm from that surface or edge. When form factor of a handset is smaller than 9cm x 5cm, a test separation distance of 5mm (instead of 10mm) is required for testing hotspot mode. When the separate distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).





9. Uncertainty

9.1 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in IEEE 1528: 2013. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

SATIMO Uncertainty- SN 08/21 EPGO352									
Measurement uncertainty for DUT averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+- %)	10g Ui (+- %)	vi
Measurement System									
Probe calibration	E.2.1	5.72	N	1.00	1.00	1.00	5.72	5.72	∞
Axial Isotropy	E.2.2	0.18	R	1.73	0.71	0.71	0.07	0.07	∞
Hemispherical Isotropy	E.2.2	1.04	R	1.73	0.71	0.71	0.42	0.42	∞
Boundary effect	E.2.3	0.80	R	1.73	1.00	1.00	0.46	0.46	∞
Linearity	E.2.4	1.25	R	1.73	1.00	1.00	0.72	0.72	∞
System detection limits	E.2.4	1.20	R	1.73	1.00	1.00	0.69	0.69	∞
Modulation response	E.2.5	3.42	R	1.73	1.00	1.00	1.97	1.97	∞
Readout Electronics	E.2.6	0.26	N	1.00	1.00	1.00	0.26	0.26	∞
Response Time	E.2.7	0.17	R	1.73	1.00	1.00	0.10	0.10	∞
Integration Time	E.2.8	1.43	R	1.73	1.00	1.00	0.83	0.83	∞
RF ambient conditions-Noise	E.6.1	3.51	R	1.73	1.00	1.00	2.03	2.03	∞
RF ambient conditions-reflections	E.6.1	3.15	R	1.73	1.00	1.00	1.82	1.82	∞
Probe positioner mechanical tolerance	E.6.2	1.20	R	1.73	1.00	1.00	0.69	0.69	∞
Probe positioning with respect to phantom shell	E.6.3	1.40	R	1.73	1.00	1.00	0.81	0.81	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.10	R	1.73	1.00	1.00	1.21	1.21	∞
Test sample Related									
Test sample positioning	E.4.2	3.10	N	1.00	1.00	1.00	3.10	3.10	∞
Device holder uncertainty	E.4.1	3.80	N	1.00	1.00	1.00	3.80	3.80	∞
Output power variation—SAR drift measurement	E.2.9	4.50	R	1.73	1.00	1.00	2.60	2.60	∞
SAR scaling	E.6.5	1.80	R	1.73	1.00	1.00	1.04	1.04	∞
Phantom and tissue parameters									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	3.70	R	1.73	1.00	1.00	2.14	2.14	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.90	N	1.00	1.00	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	2.40	R	1.73	0.78	0.71	1.08	0.98	M
Liquid permittivity measurement	E.3.3	4.10	N	1.00	0.78	0.71	3.20	2.91	M
Liquid conductivity—temperature uncertainty	E.3.4	2.70	R	1.73	0.23	0.26	0.36	0.41	∞
Liquid permittivity—temperature uncertainty	E.3.4	4.80	N	1.00	0.23	0.26	1.10	1.25	∞
Combined Standard Uncertainty			RSS				10.08	9.59	
Expanded Uncertainty (95% Confidence interval)			K=2				19.58	19.18	



SATIMO Uncertainty- SN 08/21 EPGO352									
System Validation uncertainty for DUT averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+ - %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+ %)	10g Ui (+-%)	vi
Measurement System									
Probe calibration	E.2.1	5.72	N	1.00	1.00	1.00	5.72	5.72	∞
Axial Isotropy	E.2.2	0.18	R	1.73	1.00	1.00	0.10	0.10	∞
Hemispherical Isotropy	E.2.2	1.04	R	1.73	0.00	0.00	0.00	0.00	∞
Boundary effect	E.2.3	0.80	R	1.73	1.00	1.00	0.46	0.46	∞
Linearity	E.2.4	1.25	R	1.73	1.00	1.00	0.72	0.72	∞
System detection limits	E.2.4	1.20	R	1.73	1.00	1.00	0.69	0.69	∞
Modulation response	E.2.5	3.42	R	1.73	0.00	0.00	0.00	0.00	∞
Readout Electronics	E.2.6	0.26	N	1.00	1.00	1.00	0.26	0.26	∞
Response Time	E.2.7	0.17	R	1.73	0.00	0.00	0.00	0.00	∞
Integration Time	E.2.8	1.43	R	1.73	0.00	0.00	0.00	0.00	∞
RF ambient conditions- Noise	E.6.1	3.51	R	1.73	1.00	1.00	2.03	2.03	∞
RF ambient conditions- reflections	E.6.1	3.15	R	1.73	1.00	1.00	1.82	1.82	∞
Probe positioner mechanical tolerance	E.6.2	1.20	R	1.73	1.00	1.00	0.69	0.69	∞
Probe positioning with respect to phantom shell	E.6.3	1.40	R	1.73	1.00	1.00	0.81	0.81	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.10	R	1.73	1.00	1.00	1.21	1.21	∞
System validation source									
Deviation of experimental dipole from numerical dipole	E.6.4	4.80	N	1.00	1.00	1.00	4.80	4.80	∞
Input power and SAR drift measurement	8,6.6.4	5.10	R	1.73	1.00	1.00	2.94	2.94	∞
Dipole axis to liquid distance	8,E.6.6	2.40	R	1.73	1.00	1.00	1.39	1.39	∞
Phantom and set-up									
Phantom shell uncertainty— shape, thickness, and permittivity	E.3.1	3.70	R	1.73	1.00	1.00	2.14	2.14	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.90	N	1.00	1.00	0.84	1.90	1.60	∞
Liquid conductivity (temperature uncertainty)	E.3.3	2.40	R	1.73	0.78	0.71	1.08	0.98	∞
Liquid conductivity (measured)	E.3.3	4.10	N	1.00	0.78	0.71	3.20	2.91	M
Liquid permittivity (temperature uncertainty)	E.3.4	2.70	R	1.73	0.23	0.26	0.36	0.41	∞
Liquid permittivity (measured)	E.3.4	4.80	N	1.00	0.23	0.26	1.10	1.25	M
Combined Standard Uncertainty			RSS				9.72	9.52	
Expanded Uncertainty (95% Confidence interval)			K=2				19.44	19.03	



SATIMO Uncertainty- SN 08/21 EPG0352									
。 System Check uncertainty for DUT averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+-%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System									
Probe calibration drift	E.2.1.3	5.72	N	1.00	1.00	1.00	5.72	5.72	∞
Axial Isotropy	E.2.2	0.18	R	1.73	0.00	0.00	0.00	0.00	∞
Hemispherical Isotropy	E.2.2	1.04	R	1.73	0.00	0.00	0.00	0.00	∞
Boundary effect	E.2.3	0.8	R	1.73	0.00	0.00	0.00	0.00	∞
Linearity	E.2.4	1.25	R	1.73	0.00	0.00	0.00	0.00	∞
System detection limits	E.2.4	1.20	R	1.73	0.00	0.00	0.00	0.00	∞
Modulation response	E.2.5	3.42	R	1.73	0.00	0.00	0.00	0.00	∞
Readout Electronics	E.2.6	0.26	N	1.00	0.00	0.00	0.00	0.00	∞
Response Time	E.2.7	0.17	R	1.73	0.00	0.00	0.00	0.00	∞
Integration Time	E.2.8	1.43	R	1.73	0.00	0.00	0.00	0.00	∞
RF ambient conditions-Noise	E.6.1	3.51	R	1.73	0.00	0.00	0.00	0.00	∞
RF ambient conditions-reflections	E.6.1	3.15	R	1.73	0.00	0.00	0.00	0.00	∞
Probe positioner mechanical tolerance	E.6.2	1.2	R	1.73	1.00	1.00	0.69	0.69	∞
Probe positioning with respect to phantom shell	E.6.3	1.4	R	1.73	1.00	1.00	0.81	0.81	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	3.9	R	1.73	0.00	0.00	0.00	0.00	∞
System check source (dipole)									
Deviation of experimental dipoles	E.6.4	4.8	N	1.00	1.00	1.00	4.80	4.80	∞
Input power and SAR drift measurement	8,6.6.4	5.1	R	1.73	1.00	1.00	2.94	2.94	∞
Dipole axis to liquid distance	8,E.6.6	2.4	R	1.73	1.00	1.00	1.39	1.39	∞
Phantom and tissue parameters									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	3.7	R	1.73	1.00	1.00	2.14	2.14	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1.00	1.00	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	2.4	R	1.73	0.78	0.71	1.08	0.98	∞
Liquid permittivity measurement	E.3.3	4.1	N	1.00	0.78	0.71	3.20	2.91	M
Liquid conductivity—temperature uncertainty	E.3.4	2.7	R	1.73	0.23	0.26	0.36	0.41	∞
Liquid permittivity—temperature uncertainty	E.3.4	4.8	N	1.00	0.23	0.26	1.10	1.25	M
Combined Standard Uncertainty			RSS				5.56	5.20	
Expanded Uncertainty (95% Confidence interval)			K=2				11.12	10.41	



10. Conducted Power Measurement

10.1 Test Result

Burst Average Power (dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
GSM(GMSK, 1-Slot)	33.31	33.25	33.45	30.66	30.18	29.62
GPRS (GMSK, 1-Slot)	33.30	33.24	33.44	30.60	30.15	29.58
GPRS (GMSK, 2-Slot)	32.55	32.50	32.68	29.86	29.41	28.88
GPRS (GMSK, 3-Slot)	30.79	30.75	30.92	28.07	27.68	27.23
GPRS (GMSK, 4-Slot)	29.63	29.61	29.80	26.93	26.54	26.19
EGPRS(8PSK, 1-Slot)	26.82	26.37	26.63	24.57	25.49	26.30
EGPRS(8PSK, 2-Slot)	26.00	25.80	26.03	23.79	24.03	24.53
EGPRS(8PSK, 3-Slot)	24.28	24.25	23.87	21.82	22.52	22.62
EGPRS(8PSK, 4-Slot)	23.82	23.25	23.01	20.47	21.12	21.87
Remark: GPRS, CS4 coding scheme. EGPRS, MCS5 coding scheme. Multi-Slot Class 8, Support Max 4 downlink, 1 uplink, 5 working link Multi-Slot Class 10, Support Max 4 downlink, 2 uplink, 5 working link Multi-Slot Class 12, Support Max 4 downlink, 4 uplink, 5 working link						

Frame- Average Power(dBm)						
Band	GSM 850			PCS 1900		
Channel	128	190	251	512	661	810
Frequency (MHz)	824.2	836.6	848.8	1850.2	1880.0	1909.8
GSM(GMSK, 1-Slot)	24.28	24.22	24.42	21.63	21.15	20.59
GPRS (GMSK, 1-Slot)	24.27	24.21	24.41	21.57	21.12	20.55
GPRS (GMSK, 2-Slot)	26.53	26.48	26.66	23.84	23.39	22.86
GPRS (GMSK, 3-Slot)	26.53	26.49	26.66	23.81	23.42	22.97
GPRS (GMSK, 4-Slot)	26.62	26.60	26.79	23.92	23.53	23.18
EGPRS(8PSK, 1-Slot)	17.79	17.34	17.60	15.54	16.46	17.27
EGPRS(8PSK, 2-Slot)	19.98	19.78	20.01	17.77	18.01	18.51
EGPRS(8PSK, 3-Slot)	20.02	19.99	19.61	17.56	18.26	18.36
EGPRS(8PSK, 4-Slot)	20.81	20.24	20.00	17.46	18.11	18.86
Remark : 1. SAR testing was performed on the maximum frame-averaged power mode. 2. The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum Burst - averaged power based on time slots. The calculated method is shown as below: Frame-averaged power = Burst averaged power (1 TX Slot) – 9.03 dB Frame-averaged power = Burst averaged power (2 TX Slots) – 6.02 dB Frame-averaged power = Burst averaged power (3 TX Slots) - 4.26 dB Frame-averaged power = Burst averaged power (4 TX Slots) – 3.01 dB						

**WCDMA**

Band	WCDMA Band 2			WCDMA Band 4			WCDMA Band 5		
Channel	9262	9400	9538	1312	1413	1513	4132	4183	4233
Frequency (MHz)	1852.4	1880	1907.6	1712.6	1740	1752.4	826.4	836.6	846.6
RMC 12.2Kbps	23.46	23.61	23.71	23.67	23.70	23.64	23.53	23.53	23.51
HSDPA Subtest-1	22.48	22.14	20.90	22.69	22.22	21.19	22.64	22.21	20.61
HSDPA Subtest-2	21.15	22.61	22.29	21.16	22.69	22.22	20.75	22.63	22.19
HSDPA Subtest-3	21.26	21.17	22.73	21.16	21.07	22.64	21.06	21.08	22.58
HSDPA Subtest-4	22.37	21.14	21.25	22.02	21.30	20.86	22.08	20.93	21.06
HSUPA Subtest-1	21.65	22.30	20.82	22.45	22.42	21.42	21.33	22.55	20.80
HSUPA Subtest-2	22.48	21.09	22.44	22.69	21.95	22.43	22.55	21.20	22.40
HSUPA Subtest-3	22.54	21.36	22.63	22.47	21.35	22.70	22.44	21.12	22.54
HSUPA Subtest-4	21.94	22.51	22.62	21.97	22.44	22.45	21.83	22.40	22.49
HSUPA Subtest-5	21.30	22.69	22.06	21.19	22.65	21.67	21.22	22.52	21.88

According to 3GPP 25.101 sub-clause 6.2.2, the maximum output power is allowed to be reduced by following the table.

Table 6.1A: UE maximum output power with HS-DPCCH and E-DCH

UE Transmit Channel Configuration	CM(db)	MPR(db)
For all combinations of ,DPDCH,DPCCH HS-DPDCH,E-DPDCH and E-DPCCH	$0 \leq CM \leq 3.5$	$MAX(CM-1,0)$
Note: CM=1 for $\beta_c/\beta_d=12/15$, $\beta_{hs}/\beta_c=24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.		

The device supports MPR to solve linearity issues (ACLR or SEM) due to the higher peak-to-average ratios (PAR) of the HSUPA signal. This prevents saturating the full range of the TX DAC inside of device and provides a reduced power output to the RF transceiver chip according to the Cubic Metric (a function of the combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH).

When E-DPDCH channels are present the beta gains on those channels are reduced firsts to try to get the power under the allowed limit. If the beta gains are lowered as far as possible, then a hard limiting is applied at the maximum allowed level.

The SW currently recalculates the cubic metric every time the beta gains on the E-DPDCH are reduced. The cubic metric will likely get lower each time this is done .However, there is no reported reduction of maximum output power in the HSUPA mode since the device also provides a compensation for the power back-off by increasing the gain of TX_AGC in the transceiver (PA) device.

The end effect is that the DUT output power is identical to the case where there is no MPR in the device.



2.4G WLAN

2.4GWIFI				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11b	1	2412	16.96	49.66
	7	2437	17.33	54.08
	11	2462	17.58	57.28
802.11g	1	2412	17.65	58.21
	7	2437	18.25	66.83
	11	2462	18.25	66.83
802.11 n-HT20	1	2412	19.03	79.98
	7	2437	18.68	73.79
	11	2462	19.30	85.11
802.11 n-HT40	3	2422	16.96	49.66
	6	2437	17.33	54.08
	9	2452	17.58	57.28

Bluetooth

BT				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	2.94	1.97
	39	2441	2.89	1.95
	78	2480	2.63	1.83
$\pi/4$ -QPSK(2Mbps)	0	2402	0.82	1.21
	39	2441	0.29	1.07
	78	2480	0.19	1.04
8DPSK(3Mbps)	0	2402	3.07	2.03
	39	2441	2.39	1.73
	78	2480	2.58	1.81



BLE

BLE				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	2.20	1.66
	19	2440	1.69	1.48
	39	2480	1.54	1.43

NFC

NFC		
Mode	Conducted Power (dBm)	Output Power (mW)
ASK	-43.11	0.00

WLAN (5.2Gband)

5.2G WLAN				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11a	36	5180	12.54	17.95
	40	5200	12.74	18.79
	48	5240	13.55	22.65
802.11 n-HT20	36	5180	13.53	22.54
	40	5200	13.78	23.88
	48	5240	14.54	28.44
802.11 n-HT40	38	5190	13.10	20.42
	46	5230	13.75	23.71
802.11ac-VHT20	36	5180	12.52	17.86
	40	5200	12.86	19.32
	48	5240	13.56	22.70
802.11ac-VHT40	38	5190	13.13	20.56
	46	5230	13.84	24.21
802.11ac-VHT80	42	5210	13.53	22.54



WLAN (5.8Gband)

5.8G WLAN				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11a	149	5745	12.41	17.42
	157	5785	12.88	19.41
	165	5825	12.93	19.63
802.11 n-HT20	149	5745	13.16	20.70
	157	5785	13.58	22.80
	165	5825	13.73	23.60
802.11 n-HT40	151	5755	12.97	19.82
	159	5795	13.45	22.13
802.11ac-VHT20	149	5745	12.66	18.45
	157	5785	13.07	20.28
	165	5825	13.22	20.99
802.11ac-VHT40	151	5755	13.05	20.18
	159	5795	13.47	22.23
802.11ac-VHT80	155	5775	13.58	22.80



LTE Conducted Power

General Note:

1. Anritsu CMW500 base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05, smaller bandwidth SAR testing is not required.
8. According to April 2015 TCB workshop, SAR test exclusion can be applied for testing overlapping LTE bands as follows:
 - a) The maximum output power, including tolerance, for the smaller band must be $\leq$ the larger band to qualify for the SAR test exclusion.
 - b) The channel bandwidth and other operating parameters for the smaller band must be fully supported by the larger band.



LTE Band 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.11	24.37	24.51
1.4	1	2		24.12	24.37	24.48
1.4	1	5		24.15	24.35	24.48
1.4	3	0		24.13	24.39	24.42
1.4	3	1		24.14	24.41	24.45
1.4	3	2		24.14	24.35	24.44
1.4	6	0		23.15	23.41	23.47
1.4	1	0	16-QAM	23.05	23.47	23.65
1.4	1	2		23.05	23.48	23.68
1.4	1	5		23.08	23.45	23.67
1.4	3	0		23.22	23.4	23.62
1.4	3	1		23.22	23.4	23.54
1.4	3	2		23.21	23.36	23.63
1.4	6	0		22.29	22.55	22.52
3	1	0	QPSK	24.17	24.41	24.4
3	1	7		24.23	24.42	24.44
3	1	14		24.22	24.42	24.41
3	8	0		23.16	23.36	23.5
3	8	4		23.12	23.36	23.46
3	8	7		23.16	23.36	23.46
3	15	0		23.13	23.38	23.48
3	1	0	16-QAM	23.34	23.55	23.49
3	1	7		23.39	23.63	23.5
3	1	14		23.38	23.61	23.52
3	8	0		22.13	22.4	22.54
3	8	4		22.09	22.42	22.51
3	8	7		22.14	22.44	22.54
3	15	0		22.2	22.33	22.37



LTE BAND 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.14	24.51	24.59
5	1	12		24.18	24.51	24.61
5	1	24		24.22	24.5	24.6
5	12	0		23.23	23.43	23.51
5	12	6		23.19	23.43	23.51
5	12	11		23.17	23.42	23.47
5	25	0		23.26	23.48	23.54
5	1	0		23.29	23.56	23.85
5	1	12	16-QAM	23.32	23.65	23.85
5	1	24		23.37	23.64	23.87
5	12	0		22.31	22.55	22.52
5	12	6		22.3	22.53	22.51
5	12	11		22.3	22.54	22.5
5	25	0		22.24	22.46	22.55
10	1	0	QPSK	24.22	24.54	24.46
10	1	24		24.19	24.48	24.53
10	1	49		24.3	24.48	24.62
10	25	0		23.26	23.43	23.49
10	25	12		23.24	23.42	23.57
10	25	24		23.26	23.43	23.54
10	50	0		23.27	23.44	23.49
10	1	0		23.3	23.69	23.68
10	1	24	16-QAM	23.31	23.68	23.7
10	1	49		23.39	23.67	23.76
10	25	0		22.26	22.44	22.53
10	25	12		22.23	22.43	22.6
10	25	24		22.25	22.44	22.61
10	50	0		22.3	22.45	22.49



LTE BAND 2

LTE Band 2 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	24.25	24.4	24.43
15	1	37		24.36	24.5	24.58
15	1	74		24.28	24.41	24.56
15	36	0		23.25	23.43	23.44
15	36	18		23.31	23.44	23.55
15	36	39		23.31	23.42	23.57
15	75	0		23.3	23.44	23.54
15	1	0	16-QAM	23.4	23.5	23.46
15	1	38		23.57	23.62	23.66
15	1	75		23.51	23.52	23.64
15	36	0		22.25	22.46	22.43
15	36	18		22.29	22.46	22.51
15	36	39		22.3	22.44	22.57
15	75	0		22.3	22.44	22.55
20	1	0	QPSK	24.31	24.34	24.37
20	1	49		24.41	24.5	24.5
20	1	99		24.44	24.36	24.62
20	50	0		23.34	23.44	23.47
20	50	24		23.36	23.52	23.57
20	50	49		23.41	23.46	23.62
20	100	0		23.39	23.43	23.57
20	1	0	16-QAM	23.29	23.55	23.4
20	1	49		23.38	23.66	23.65
20	1	99		23.43	23.55	23.66
20	50	0		22.38	22.45	22.46
20	50	24		22.38	22.51	22.6
20	50	49		22.43	22.44	22.63
20	100	0		22.38	22.41	22.54



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.5	24.7	24.49
1.4	1	2		24.49	24.72	24.5
1.4	1	5		24.5	24.7	24.48
1.4	3	0		24.51	24.59	24.51
1.4	3	1		24.52	24.56	24.51
1.4	3	2		24.52	24.58	24.52
1.4	6	0		23.52	23.63	23.53
1.4	1	0	16-QAM	23.73	23.59	23.55
1.4	1	2		23.74	23.58	23.58
1.4	1	5		23.73	23.59	23.54
1.4	3	0		23.67	23.64	23.53
1.4	3	1		23.65	23.62	23.55
1.4	3	2		23.62	23.64	23.5
1.4	6	0		22.6	22.76	22.69
3	1	0	QPSK	24.48	24.69	24.53
3	1	7		24.52	24.71	24.53
3	1	14		24.43	24.72	24.52
3	8	0		23.53	23.66	23.51
3	8	4		23.49	23.6	23.47
3	8	7		23.52	23.62	23.5
3	15	0		23.52	23.63	23.52
3	1	0	16-QAM	23.54	23.97	23.71
3	1	7		23.62	23.96	23.73
3	1	14		23.55	23.94	23.74
3	8	0		22.59	22.59	22.57
3	8	4		22.57	22.58	22.55
3	8	7		22.61	22.58	22.56
3	15	0		22.39	22.69	22.44



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.68	24.67	24.67
5	1	12		24.67	24.71	24.64
5	1	24		24.66	24.68	24.63
5	12	0		23.57	23.7	23.56
5	12	6		23.55	23.66	23.57
5	12	11		23.56	23.7	23.54
5	25	0		23.61	23.72	23.6
5	1	0	16-QAM	23.94	23.88	23.72
5	1	12		23.91	23.92	23.67
5	1	24		23.93	23.87	23.76
5	12	0		22.61	22.77	22.7
5	12	6		22.57	22.75	22.68
5	12	11		22.59	22.75	22.68
5	25	0		22.61	22.67	22.59
10	1	0	QPSK	24.61	24.73	24.66
10	1	24		24.6	24.71	24.57
10	1	49		24.72	24.71	24.59
10	25	0		23.55	23.73	23.63
10	25	12		23.58	23.7	23.59
10	25	24		23.64	23.72	23.6
10	50	0		23.61	23.73	23.6
10	1	0	16-QAM	23.8	23.98	23.7
10	1	24		23.81	23.9	23.68
10	1	49		23.91	23.94	23.69
10	25	0		22.54	22.8	22.6
10	25	12		22.57	22.74	22.56
10	25	24		22.61	22.76	22.59
10	50	0		22.62	22.7	22.6



LTE BAND 4

LTE Band 4 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	24.59	24.79	24.64
15	1	37		24.66	24.83	24.68
15	1	74		24.69	24.75	24.61
15	36	0		23.59	23.72	23.6
15	36	18		23.64	23.7	23.62
15	36	39		23.68	23.7	23.61
15	75	0		23.62	23.74	23.65
15	1	0	16-QAM	23.64	23.8	23.88
15	1	38		23.72	23.86	23.86
15	1	75		23.77	23.78	23.8
15	36	0		22.63	22.71	22.62
15	36	18		22.66	22.69	22.6
15	36	39		22.7	22.71	22.61
15	75	0		22.64	22.76	22.64
20	1	0	QPSK	24.5	24.64	24.7
20	1	49		24.63	24.8	24.71
20	1	99		24.76	24.69	24.67
20	50	0		23.65	23.78	23.63
20	50	24		23.72	23.78	23.67
20	50	49		23.75	23.79	23.68
20	100	0		23.67	23.77	23.66
20	1	0	16-QAM	23.69	23.75	23.75
20	1	49		23.8	23.93	23.75
20	1	99		23.95	23.81	23.67
20	50	0		22.65	22.78	22.65
20	50	24		22.7	22.78	22.7
20	50	49		22.75	22.77	22.71
20	100	0		22.65	22.75	22.64



LTE BAND 5

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.02	23.97	24.01
1.4	1	2		24	23.97	23.96
1.4	1	5		24.05	23.95	23.96
1.4	3	0		23.91	23.94	23.91
1.4	3	1		23.92	23.97	23.91
1.4	3	2		23.94	23.96	23.89
1.4	6	0		22.93	22.98	22.98
1.4	1	0	16-QAM	22.86	23	23.21
1.4	1	2		22.84	23	23.16
1.4	1	5		22.88	23.02	23.16
1.4	3	0		22.97	22.97	23.05
1.4	3	1		22.97	23	23.04
1.4	3	2		22.99	22.93	23.03
1.4	6	0		22.03	22.15	22
3	1	0	QPSK	23.94	23.95	23.95
3	1	7		23.97	23.94	23.96
3	1	14		23.93	23.92	23.9
3	8	0		22.97	22.99	22.99
3	8	4		22.94	22.97	22.96
3	8	7		22.96	22.95	22.9
3	15	0		22.96	22.97	22.93
3	1	0	16-QAM	23.15	23	23.28
3	1	7		23.18	23.01	23.22
3	1	14		23.17	23.01	23.09
3	8	0		22.04	22.07	21.97
3	8	4		22.01	22.03	21.96
3	8	7		22.03	22.04	21.91
3	15	0		21.9	21.83	22.02



LTE BAND 5

LTE Band 5 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.96	24.15	24.02
5	1	12		24	24.11	24.04
5	1	24		23.97	24.09	24.02
5	12	0		23.01	22.98	23.01
5	12	6		23.04	22.99	22.96
5	12	11		22.98	22.96	22.96
5	25	0		23.05	23.01	23
5	1	0	16-QAM	23.11	23.15	23.33
5	1	12		23.14	23.13	23.33
5	1	24		23.12	23.13	23.31
5	12	0		22.1	22.15	21.99
5	12	6		22.12	22.11	21.98
5	12	11		22.06	22.11	21.97
5	25	0		22.01	21.99	21.99
10	1	0	QPSK	23.97	23.97	23.93
10	1	24		24.01	24	23.95
10	1	49		23.96	23.95	23.96
10	25	0		22.98	22.94	22.94
10	25	12		22.96	23	22.94
10	25	24		22.98	22.96	22.95
10	50	0		22.99	22.97	22.94
10	1	0	16-QAM	23.2	23.16	23
10	1	24		23.22	23.21	23.01
10	1	49		23.25	23.17	23.02
10	25	0		21.99	22	21.95
10	25	12		21.97	22.06	21.95
10	25	24		22	22.02	21.95
10	50	0		22.01	21.96	21.95



LTE BAND 7

LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.7	24.23	24.96
5	1	12		23.73	24.34	24.98
5	1	24		23.74	24.33	25.04
5	12	0		22.61	23.31	23.97
5	12	6		22.64	23.3	23.98
5	12	11		22.61	23.33	23.97
5	25	0		22.66	23.37	24.04
5	1	0	16-QAM	22.97	23.38	24.11
5	1	12		23.01	23.5	24.17
5	1	24		22.99	23.47	24.23
5	12	0		21.6	22.41	23.09
5	12	6		21.63	22.38	23.08
5	12	11		21.61	22.44	23.11
5	25	0		21.74	22.33	23.01
10	1	0	QPSK	23.57	24.25	24.88
10	1	24		23.58	24.31	24.95
10	1	49		23.61	24.39	25.12
10	25	0		22.63	23.33	23.92
10	25	12		22.64	23.33	23.96
10	25	24		22.66	23.36	24.01
10	50	0		22.64	23.35	23.98
10	1	0	16-QAM	22.81	23.3	24.07
10	1	24		22.82	23.4	24.16
10	1	49		22.84	23.49	24.32
10	25	0		21.68	22.34	22.93
10	25	12		21.7	22.33	22.99
10	25	24		21.71	22.37	23.02
10	50	0		21.74	22.35	22.99



LTE Band 7 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	23.69	24.27	24.67
15	1	37		23.70	24.42	24.95
15	1	74		23.78	24.45	25.09
15	36	0		22.59	23.33	23.83
15	36	18		22.61	23.35	23.92
15	36	39		22.66	23.4	24
15	75	0		22.66	23.36	23.93
15	1	0	16-QAM	22.68	23.44	23.74
15	1	37		22.71	23.58	23.95
15	1	74		22.79	23.63	24.12
15	36	0		21.57	22.31	22.87
15	36	18		21.59	22.33	22.95
15	36	39		21.65	22.4	23.03
15	75	0		21.77	22.38	22.95
20	1	0	QPSK	23.71	24.14	24.55
20	1	49		23.73	24.34	24.88
20	1	99		23.91	24.48	25.17
20	50	0		22.61	23.36	23.78
20	50	24		22.69	23.42	23.95
20	50	49		22.77	23.45	24.04
20	100	0		22.7	23.4	23.88
20	1	0	16-QAM	22.65	23.33	23.69
20	1	49		22.68	23.53	24
20	1	99		22.85	23.65	24.25
20	50	0		21.64	22.35	22.78
20	50	24		21.71	22.4	22.94
20	50	49		21.79	22.46	23.02
20	100	0		21.68	22.37	22.87



LTE BAND 12

LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24	24.06	23.95
1.4	1	2		24.03	24.12	23.93
1.4	1	5		24.07	24.13	23.9
1.4	3	0		23.94	23.96	23.96
1.4	3	1		23.95	23.98	23.95
1.4	3	2		23.98	23.98	23.92
1.4	6	0		22.99	22.97	22.95
1.4	1	0	16-QAM	23.17	22.9	23.02
1.4	1	2		23.2	22.94	22.99
1.4	1	5		23.24	22.93	22.96
1.4	3	0		23.08	23.02	23.02
1.4	3	1		23.1	23.05	23.02
1.4	3	2		23.15	23.06	22.95
1.4	6	0		22.07	22.14	22.1
3	1	0	QPSK	23.98	23.92	24.04
3	1	7		23.98	24.03	24.03
3	1	14		23.98	24.01	24
3	8	0		22.99	23.01	23.02
3	8	4		22.96	22.95	22.99
3	8	7		22.95	23.01	22.93
3	15	0		22.98	23.03	22.99
3	1	0	16-QAM	23.13	22.98	23.29
3	1	7		23.19	23.09	23.27
3	1	14		23.2	23.08	23.19
3	8	0		22.04	22.09	21.98
3	8	4		22.02	22.04	21.96
3	8	7		22.01	22.08	21.89
3	15	0		21.89	21.91	22.06



LTE Band 12 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	23.98	24.12	24.15
5	1	12		23.95	24.16	24.13
5	1	24		24.04	24.11	24.05
5	12	0		23.01	23.06	23.02
5	12	6		23.01	23.02	23.01
5	12	11		23.06	23.03	23.01
5	25	0		23.05	23.06	23.05
5	1	0	16-QAM	23.13	23.12	23.37
5	1	12		23.11	23.2	23.41
5	1	24		23.2	23.2	23.33
5	12	0		22.14	22.16	22.04
5	12	6		22.09	22.12	22.02
5	12	11		22.15	22.16	22.01
5	25	0		22.02	22.03	22.05
10	1	0	QPSK	24	23.99	24
10	1	24		24.09	24.09	24.11
10	1	49		24.11	24.02	24.04
10	25	0		22.99	23.05	23.04
10	25	12		23.02	23.04	23
10	25	24		23.02	23.02	23.02
10	50	0		23.04	23.04	23.03
10	1	0	16-QAM	23.2	23.04	23.23
10	1	24		23.3	23.15	23.28
10	1	49		23.3	23.09	23.28
10	25	0		21.97	22.04	22.04
10	25	12		22	22.04	21.99
10	25	24		22.01	22.04	22
10	50	0		22.04	22.07	22.05



LTE Band 17

LTE Band 17 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.04	23.97	24.03
5	1	12		24.09	23.96	24.05
5	1	24		24.09	23.94	24.06
5	12	0		23	22.97	22.95
5	12	6		23	22.98	22.93
5	12	11		22.94	22.98	22.9
5	25	0		23.01	22.99	23
5	1	0	16-QAM	23.33	23.1	23.1
5	1	12		23.36	23.11	23.09
5	1	24		23.37	23.1	23.15
5	12	0		22.01	22.08	22.08
5	12	6		21.99	22.07	22.04
5	12	11		21.97	22.04	22.02
5	25	0		22.03	21.96	21.97
10	1	0	QPSK	23.96	23.95	23.92
10	1	24		24.02	23.95	23.94
10	1	49		23.98	23.89	23.89
10	25	0		22.97	22.96	22.94
10	25	12		22.93	22.94	22.93
10	25	24		22.94	22.95	22.89
10	50	0		22.96	22.97	22.95
10	1	0	16-QAM	23.22	23.17	23.01
10	1	24		23.18	23.16	23.05
10	1	49		23.27	23.13	23.03
10	25	0		21.96	22.04	21.95
10	25	12		21.94	21.99	21.92
10	25	24		21.96	21.99	21.92
10	50	0		21.97	21.97	21.95



LTE Band 41

LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.84	25.06	24.85
5	1	12		24.91	25.08	24.86
5	1	24		24.92	25.09	24.78
5	12	0		24.89	25.01	24.78
5	12	6		24.9	25	24.74
5	12	11		24.91	25	24.71
5	25	0		24.91	25.01	24.75
5	1	0	16-QAM	24.92	25.07	25.19
5	1	12		24.99	25.12	25.24
5	1	24		25.03	25.13	25.13
5	12	0		25.03	25.1	24.81
5	12	6		25.03	25.08	24.75
5	12	11		25.05	25.09	24.7
5	25	0		24.91	25.02	24.8
10	1	0	QPSK	24.74	24.95	24.68
10	1	24		24.87	25.07	24.71
10	1	49		24.84	25.01	24.63
10	25	0		24.89	24.97	24.77
10	25	12		24.96	24.97	24.78
10	25	24		25	24.97	24.71
10	50	0		24.98	25.01	24.79
10	1	0	16-QAM	24.77	25.3	25.1
10	1	24		24.91	25.36	25.1
10	1	49		24.9	25.31	25.06
10	25	0		24.94	25.01	24.87
10	25	12		24.99	25.01	24.87
10	25	24		25.05	25	24.8
10	50	0		24.99	25.03	24.78



LTE Band 41 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	24.65	24.9	24.63
15	1	37		24.81	25.06	24.7
15	1	74		24.81	24.96	24.57
15	36	0		24.86	24.94	24.75
15	36	18		24.94	24.97	24.74
15	36	39		24.97	24.97	24.71
15	75	0		24.96	24.99	24.75
15	1	0	16-QAM	24.71	25	25.07
15	1	38		24.85	25.12	25.09
15	1	75		24.88	25.07	24.98
15	36	0		24.91	24.96	24.76
15	36	18		24.99	24.97	24.75
15	36	39		25.02	24.98	24.73
15	75	0		24.95	25.01	24.73
20	1	0	QPSK	24.8	24.8	24.64
20	1	49		25.03	25.03	24.77
20	1	99		24.95	24.94	24.6
20	50	0		24.89	24.99	24.79
20	50	24		25	25.03	24.82
20	50	49		25	25.02	24.73
20	100	0		24.95	24.99	24.75
20	1	0	16-QAM	24.77	24.91	24.84
20	1	49		25.04	25.11	25
20	1	99		24.93	25.05	24.84
20	50	0		24.92	24.99	24.79
20	50	24		25.05	25.05	24.8
20	50	49		25.02	25.01	24.73
20	100	0		24.94	24.99	24.75



LTE Band 66

LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
1.4	1	0	QPSK	24.63	24.72	24.39
1.4	1	2		24.6	24.72	24.39
1.4	1	5		24.54	24.74	24.36
1.4	3	0		24.62	24.61	24.37
1.4	3	1		24.62	24.58	24.33
1.4	3	2		24.61	24.59	24.39
1.4	6	0		23.58	23.6	23.39
1.4	1	0	16-QAM	23.8	23.56	23.47
1.4	1	2		23.84	23.56	23.45
1.4	1	5		23.8	23.57	23.45
1.4	3	0		23.75	23.67	23.43
1.4	3	1		23.69	23.62	23.41
1.4	3	2		23.68	23.62	23.36
1.4	6	0		22.63	22.72	22.56
3	1	0	QPSK	24.62	24.58	24.43
3	1	7		24.63	24.6	24.51
3	1	14		24.59	24.57	24.44
3	8	0		23.57	23.59	23.42
3	8	4		23.54	23.64	23.36
3	8	7		23.59	23.69	23.4
3	15	0		23.57	23.66	23.41
3	1	0	16-QAM	23.76	23.65	23.69
3	1	7		23.78	23.73	23.7
3	1	14		23.82	23.7	23.65
3	8	0		22.63	22.69	22.37
3	8	4		22.6	22.7	22.36
3	8	7		22.67	22.71	22.36
3	15	0		22.51	22.5	22.45



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
5	1	0	QPSK	24.61	24.75	24.61
5	1	12		24.64	24.78	24.58
5	1	24		24.61	24.74	24.59
5	12	0		23.64	23.64	23.48
5	12	6		23.66	23.64	23.45
5	12	11		23.65	23.67	23.43
5	25	0		23.7	23.71	23.51
5	1	0	16-QAM	23.74	23.79	23.91
5	1	12		23.83	23.85	23.93
5	1	24		23.81	23.8	23.81
5	12	0		22.73	22.77	22.51
5	12	6		22.76	22.77	22.47
5	12	11		22.76	22.77	22.48
5	25	0		22.67	22.7	22.5
10	1	0	QPSK	24.65	24.67	24.61
10	1	24		24.65	24.7	24.5
10	1	49		24.73	24.71	24.49
10	25	0		23.66	23.68	23.56
10	25	12		23.63	23.66	23.53
10	25	24		23.69	23.72	23.51
10	50	0		23.71	23.67	23.53
10	1	0	16-QAM	23.87	23.89	23.69
10	1	24		23.86	23.91	23.63
10	1	49		23.91	23.93	23.59
10	25	0		22.63	22.71	22.54
10	25	12		22.62	22.7	22.51
10	25	24		22.68	22.77	22.49
10	50	0		22.7	22.67	22.53



LTE Band 66 Maximum Average Power [dBm]						
BW [MHz]	RB Size	RB Offset	Mod	Lowest	Middle	Highest
15	1	0	QPSK	24.63	24.74	24.65
15	1	37		24.73	24.76	24.64
15	1	74		24.72	24.7	24.54
15	36	0		23.63	23.69	23.61
15	36	18		23.66	23.67	23.58
15	36	39		23.7	23.68	23.54
15	75	0		23.68	23.69	23.58
15	1	0	16-QAM	23.71	23.79	23.88
15	1	38		23.77	23.87	23.84
15	1	75		23.8	23.79	23.73
15	36	0		22.67	22.67	22.62
15	36	18		22.69	22.63	22.57
15	36	39		22.72	22.67	22.54
15	75	0		22.7	22.72	22.6
20	1	0	QPSK	24.66	24.66	24.63
20	1	49		24.78	24.71	24.67
20	1	99		24.84	24.64	24.53
20	50	0		23.71	23.71	23.67
20	50	24		23.77	23.75	23.64
20	50	49		23.78	23.77	23.61
20	100	0		23.72	23.71	23.63
20	1	0	16-QAM	23.68	23.9	23.72
20	1	49		23.75	23.93	23.79
20	1	99		23.84	23.86	23.61
20	50	0		22.72	22.74	22.67
20	50	24		22.8	22.73	22.64
20	50	49		22.8	22.75	22.61
20	100	0		22.73	22.69	22.64

11. EUT and Test Setup Photo

11.1 EUT Photo

Front side



Back side



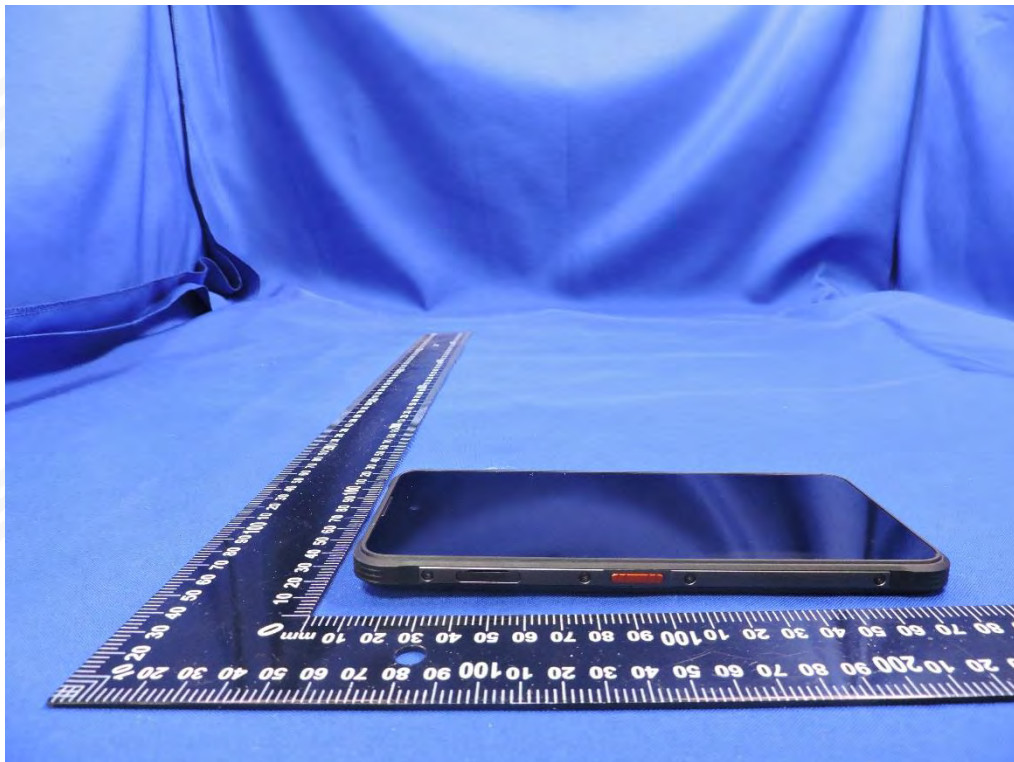
Top side



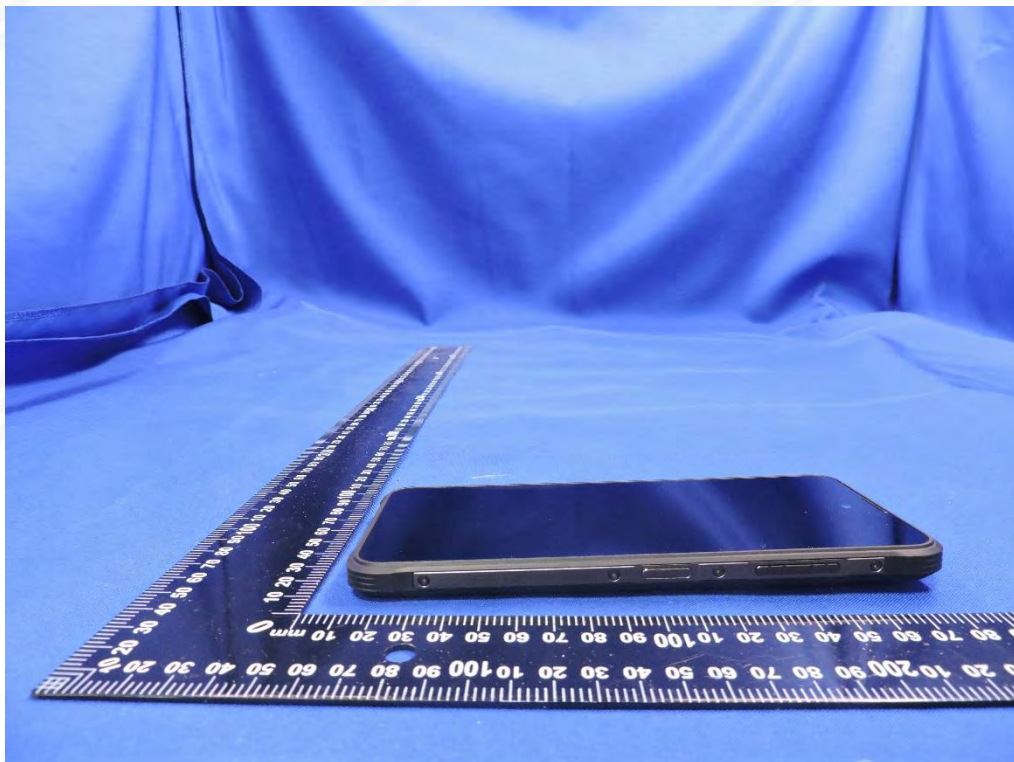
Bottom side



Left side

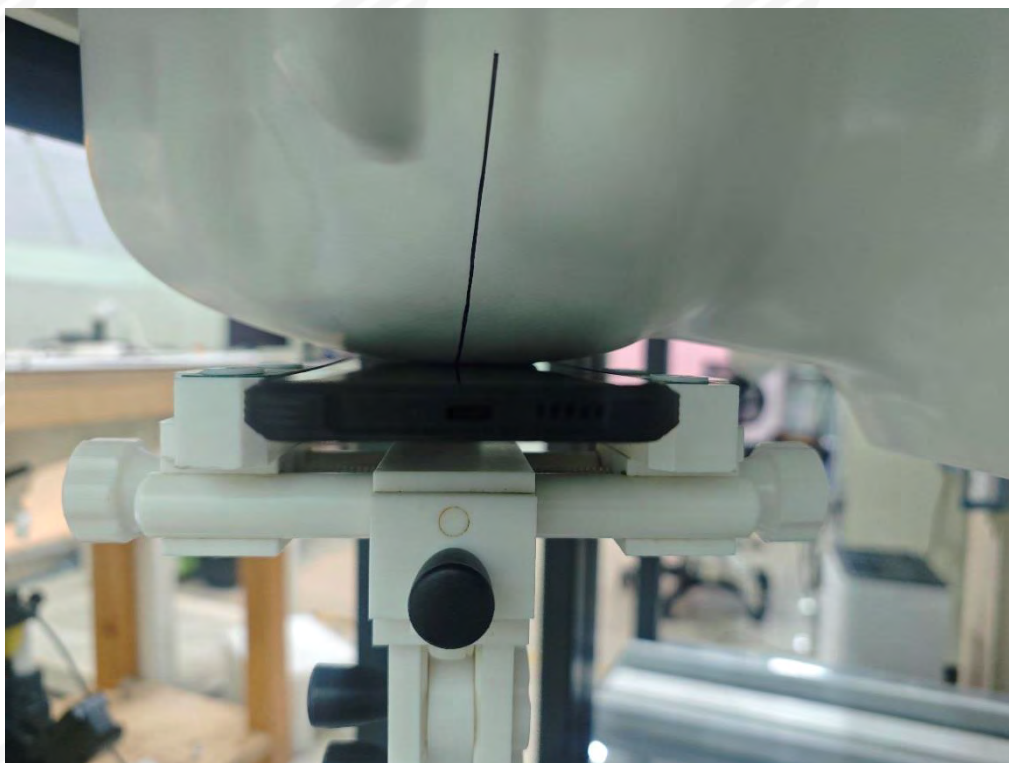


Right side

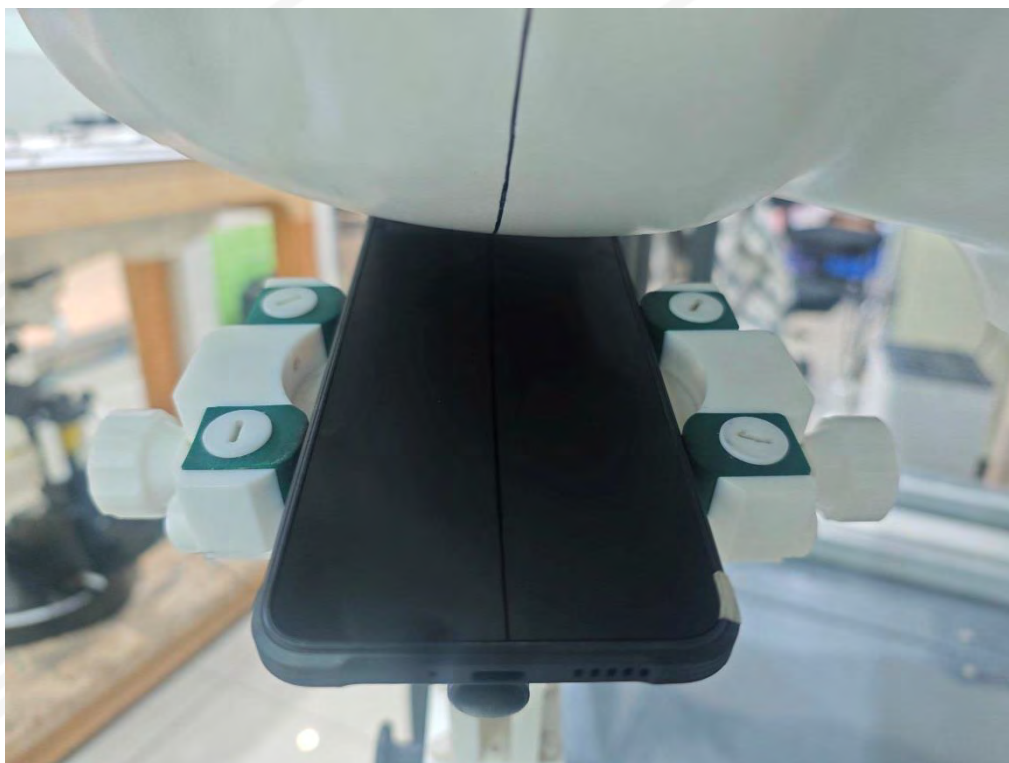


11.2 Setup Photo

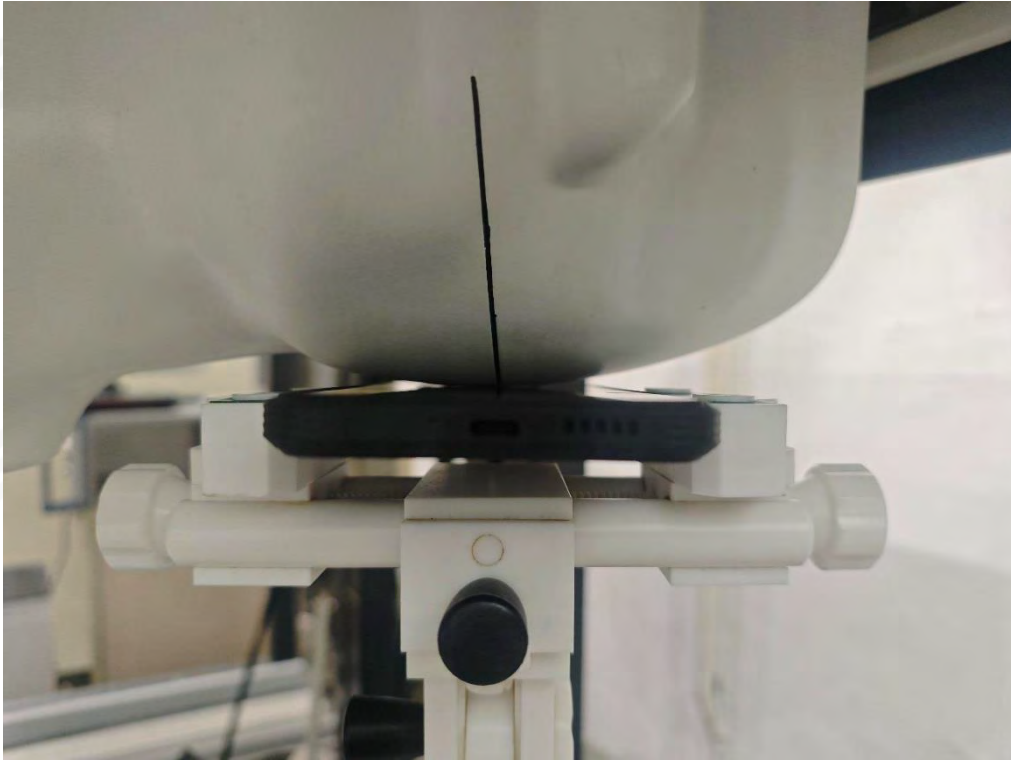
Right Touch



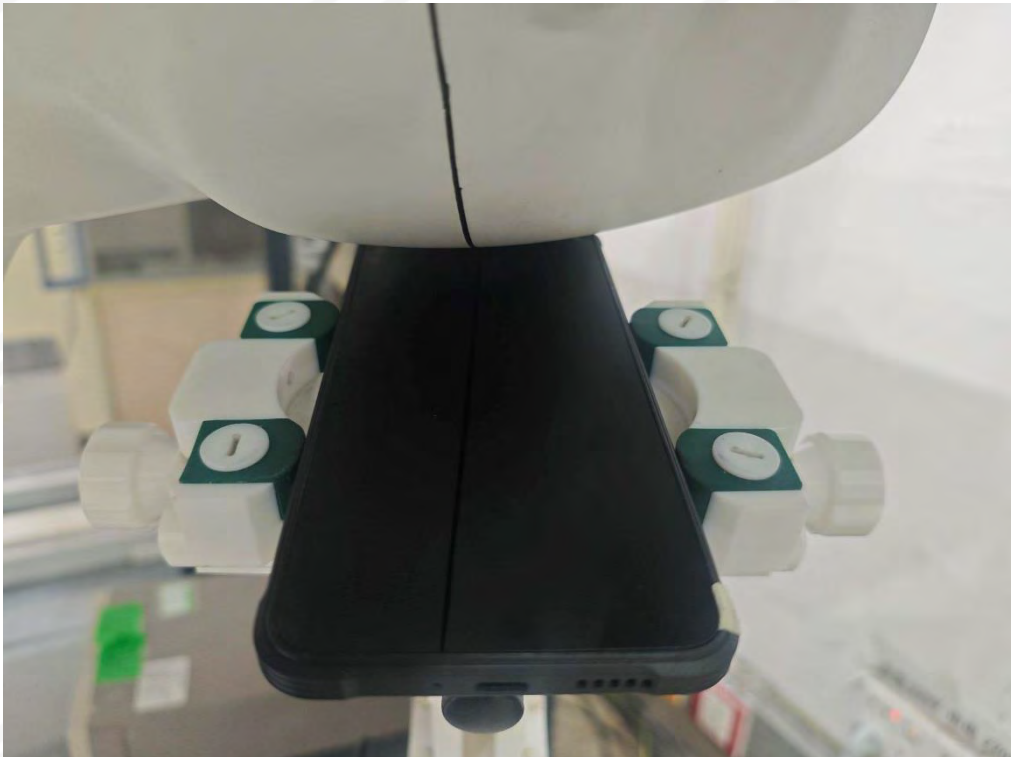
Right Tilt



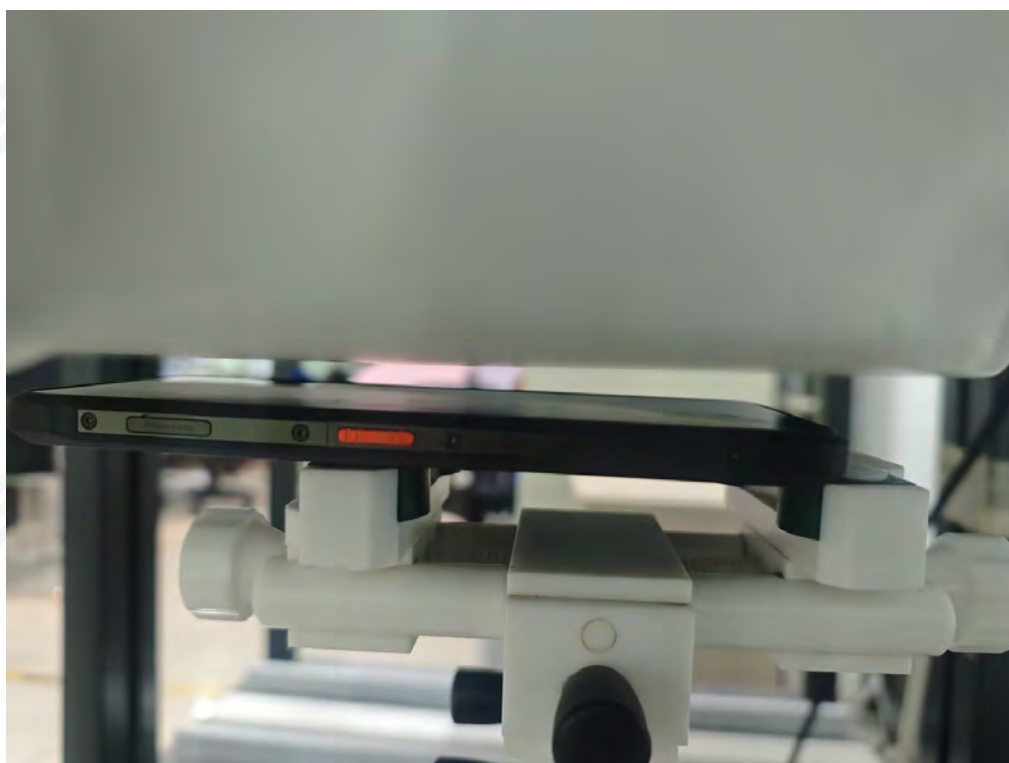
Left Touch



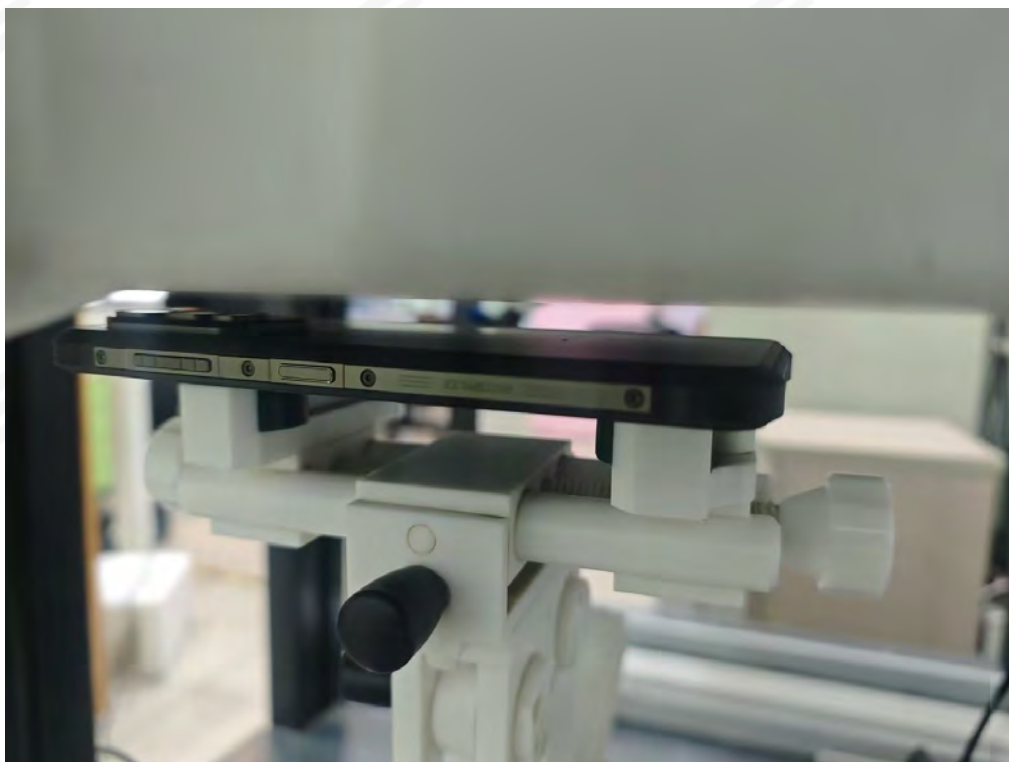
Left Tilt



Body Front side(separation distance is 10mm)



Body Back side(separation distance is 10mm)



Body Left side(separation distance is 10mm)



Body Right side(separation distance is 10mm)



Body Bottom side(separation distance is 10mm)

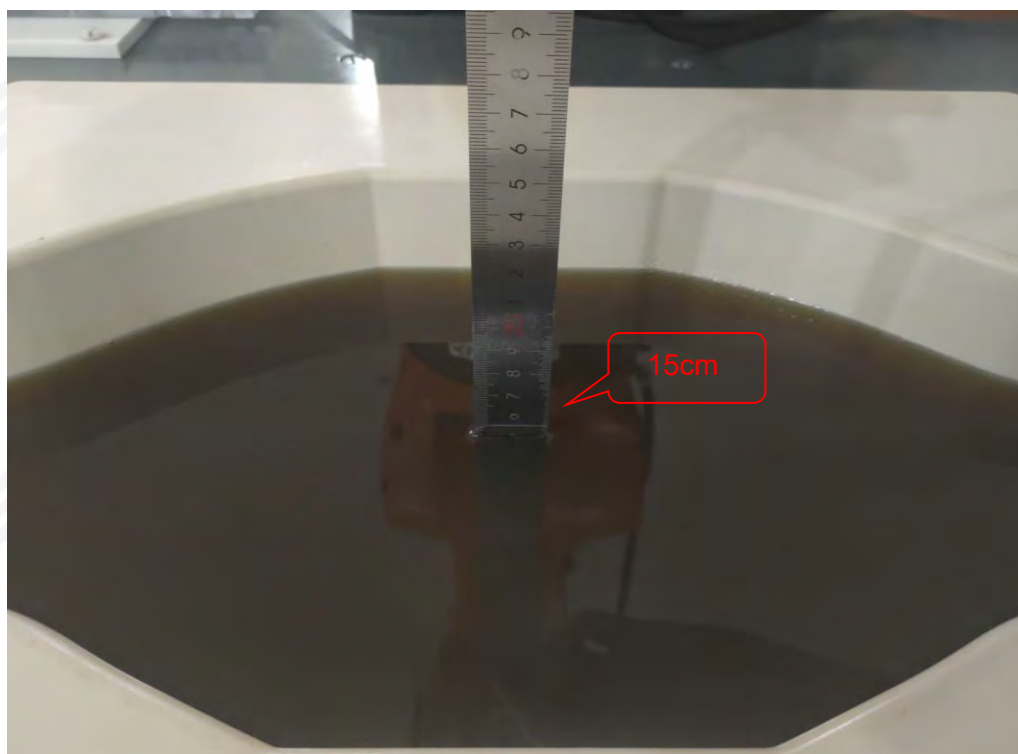


Body Top side(separation distance is 10mm)





Liquid depth (15 cm)





12. SAR Result Summary

12.1 Head SAR

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 1g (W/Kg)	Power Drift(%)	Max. Turn-up Power(dBm)	Meas. Output Power(dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas.No.
GSM850	N/A	GPRS (GMSK, 4-Slot)	N/A	N/A	Right Cheek	848.8	0.174	-3.81	30.00	29.80	1.047	0.182	1
					Right Tilt	848.8	0.081	-2.19	30.00	29.80	1.047	0.085	/
					Left Cheek	848.8	0.157	-3.08	30.00	29.80	1.047	0.164	/
					Left Tilt	848.8	0.074	-0.73	30.00	29.80	1.047	0.077	/
GSM1900	N/A	GPRS (GMSK, 4-Slot)	N/A	N/A	Right Cheek	1850.2	0.048	2.50	27.00	26.93	1.016	0.049	3
					Right Tilt	1850.2	0.022	3.88	27.00	26.93	1.016	0.022	/
					Left Cheek	1850.2	0.031	2.40	27.00	26.93	1.016	0.032	/
					Left Tilt	1850.2	0.019	-1.19	27.00	26.93	1.016	0.019	/
WCDMA Band 2	N/A	RMC	N/A	N/A	Right Cheek	1907.6	0.041	2.97	24.00	23.71	1.069	0.044	5
					Right Tilt	1907.6	0.024	3.26	24.00	23.71	1.069	0.026	/
					Left Cheek	1907.6	0.038	-0.33	24.00	23.71	1.069	0.041	/
					Left Tilt	1907.6	0.021	-2.48	24.00	23.71	1.069	0.022	/
WCDMA Band 4	N/A	RMC	N/A	N/A	Right Cheek	1712.6	0.641	3.57	24.00	23.67	1.079	0.692	/
					Right Cheek	1740	0.689	-0.83	24.00	23.70	1.072	0.738	/
					Right Cheek	1752.4	0.634	0.96	24.00	23.64	1.086	0.689	7
					Right Tilt	1740	0.341	-2.48	24.00	23.70	1.072	0.365	/
					Left Cheek	1740	0.625	-3.54	24.00	23.70	1.072	0.670	/
					Left Tilt	1740	0.307	-0.22	24.00	23.70	1.072	0.329	/
WCDMA Band 5	N/A	RMC	N/A	N/A	Right Cheek	836.6	0.105	0.80	24.00	23.53	1.114	0.117	9
					Right Tilt	836.6	0.053	-2.19	24.00	23.53	1.114	0.059	/
					Left Cheek	836.6	0.096	1.30	24.00	23.53	1.114	0.107	/
					Left Tilt	836.6	0.044	0.19	24.00	23.53	1.114	0.049	/
2.4G WLAN	N/A	802.11b	N/A	N/A	Right Cheek	2462	0.032	-2.45	18.00	17.58	1.102	0.035	11
					Right Tilt	2462	0.017	0.74	18.00	17.58	1.102	0.019	/
					Left Cheek	2462	0.028	-1.80	18.00	17.58	1.102	0.031	/
					Left Tilt	2462	0.014	-2.78	18.00	17.58	1.102	0.015	/
5.2G WLAN	N/A	802.11 n-HT20	N/A	N/A	Right Cheek	5240	0.242	0.43	15.00	14.54	1.112	0.269	13
					Right Tilt	5240	0.179	2.73	15.00	14.54	1.112	0.199	/
					Left Cheek	5240	0.235	0.31	15.00	14.54	1.112	0.261	/
					Left Tilt	5240	0.168	2.19	15.00	14.54	1.112	0.187	/
5.8G WLAN	N/A	802.11 n-HT20	N/A	N/A	Right Cheek	5825	0.234	2.50	14.00	13.73	1.064	0.249	15
					Right Tilt	5825	0.188	-1.03	14.00	13.73	1.064	0.200	/
					Left Cheek	5825	0.213	3.79	14.00	13.73	1.064	0.227	/
					Left Tilt	5825	0.176	2.85	14.00	13.73	1.064	0.187	/



Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 1g (W/Kg)	Power Drift(%)	Max. Turn-up Power(dBm)	Meas. Output Power(dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas.No.
LTE Band 2	20M	QPSK	1	99	Right Cheek	1900	0.039	-2.12	25.00	24.62	1.091	0.043	17
			50	49	Right Cheek	1900	0.032	-2.15	24.00	23.62	1.091	0.035	/
			1	99	Right Tilt	1900	0.021	2.30	25.00	24.62	1.091	0.023	/
			50	49	Right Tilt	1900	0.019	2.52	24.00	23.62	1.091	0.021	/
			1	99	Left Cheek	1900	0.035	3.45	25.00	24.62	1.091	0.038	/
			50	49	Left Cheek	1900	0.030	-3.69	24.00	23.62	1.091	0.033	/
			1	99	Left Tilt	1900	0.018	3.32	25.00	24.62	1.091	0.020	/
LTE Band 5	10M	QPSK	50	49	Left Tilt	1900	0.015	0.22	24.00	23.62	1.091	0.016	/
			24		Right Cheek	829	0.569	-0.17	24.50	24.01	1.119	0.637	19
			25	12	Right Cheek	844	0.534	-1.52	23.50	23.00	1.122	0.599	/
			1	24	Right Tilt	829	0.247	-1.43	24.50	24.01	1.119	0.277	/
			25	12	Right Tilt	844	0.231	-0.77	23.50	23.00	1.122	0.259	/
			1	24	Left Cheek	829	0.559	3.48	24.50	24.01	1.119	0.626	/
			25	12	Left Cheek	844	0.531	-0.03	23.50	23.00	1.122	0.596	/
LTE Band 7	20M	QPSK	1	24	Left Tilt	829	0.230	-1.71	24.50	24.01	1.119	0.257	/
			25	12	Left Tilt	844	0.221	-0.17	23.50	23.00	1.122	0.248	/
			1	24	Right Cheek	2560	0.125	2.93	25.50	25.17	1.079	0.135	21
			25	12	Right Cheek	2560	0.112	0.47	24.50	24.04	1.112	0.125	/
			1	24	Right Tilt	2560	0.063	0.62	25.50	25.17	1.079	0.068	/
			25	12	Right Tilt	2560	0.054	2.07	24.50	24.04	1.112	0.060	/
			1	24	Left Cheek	2560	0.117	-2.62	25.50	25.17	1.079	0.126	/
LTE Band 12/17	10M	QPSK	25	12	Left Cheek	2560	0.106	1.90	24.50	24.04	1.112	0.118	/
			1	24	Left Tilt	2560	0.059	3.61	25.50	25.17	1.079	0.064	/
			25	12	Left Tilt	2560	0.050	-2.86	24.50	24.04	1.112	0.056	/
			1	24	Right Cheek	711	0.117	-2.27	24.50	24.11	1.094	0.128	23
			25	0	Right Cheek	707.5	0.104	0.72	23.50	23.05	1.109	0.115	/
			1	24	Right Tilt	711	0.055	3.13	24.50	24.11	1.094	0.060	/
			25	0	Right Tilt	707.5	0.048	1.60	23.50	23.05	1.109	0.053	/
LTE Band 41	20M	QPSK	1	24	Left Cheek	711	0.113	2.70	24.50	24.11	1.094	0.124	/
			25	0	Left Cheek	707.5	0.101	0.13	23.50	23.05	1.109	0.112	/
			1	24	Left Tilt	711	0.052	-1.43	24.50	24.11	1.094	0.057	/
			25	0	Left Tilt	707.5	0.047	0.96	23.50	23.05	1.109	0.052	/
			1	49	Right Cheek	2593	0.048	-1.49	25.50	25.03	1.114	0.053	25
			50	24	Right Cheek	2593	0.041	-1.40	25.50	25.03	1.114	0.046	/
			1	49	Right Tilt	2593	0.025	2.58	25.50	25.03	1.114	0.028	/
LTE Band 66/4	20M	QPSK	50	24	Right Tilt	2593	0.018	1.08	25.50	25.03	1.114	0.020	/
			1	49	Left Cheek	2593	0.044	4.00	25.50	25.03	1.114	0.049	/
			50	24	Left Cheek	2593	0.037	-0.34	25.50	25.03	1.114	0.041	/
			1	49	Left Tilt	2593	0.022	2.29	25.50	25.03	1.114	0.025	/
			50	24	Left Tilt	2593	0.017	2.56	25.50	25.03	1.114	0.019	/
			1	99	Right Cheek	1720	0.536	-2.36	25.00	24.84	1.038	0.556	27
			50	49	Right Cheek	1720	0.496	2.61	24.00	23.78	1.052	0.522	/
LTE Band 66/4	20M	QPSK	1	99	Right Tilt	1720	0.227	1.94	25.00	24.84	1.038	0.236	/
			50	49	Right Tilt	1720	0.213	0.00	24.00	23.78	1.052	0.224	/
			1	99	Left Cheek	1720	0.507	3.33	25.00	24.84	1.038	0.526	/
			50	49	Left Cheek	1720	0.482	3.16	24.00	23.78	1.052	0.507	/
			1	99	Left Tilt	1720	0.210	0.11	25.00	24.84	1.038	0.218	/
			50	49	Left Tilt	1720	0.202	-1.87	24.00	23.78	1.052	0.212	/

Note:

- Per KDB 447498 D04, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - Scaled SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
- Per KDB 865664 D01, Repeated measurement is not required when the original highest measured SAR is <0.80 W/kg

**12.2 Body-worn and Hotspot SAR**

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 1g (W/Kg)	Power Drift(%)	Max Turn-up Power(dBm)	Meas. Output Power(dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas.No.
GSM850	N/A	GPRS (GMSK, 4-Slot)	N/A	N/A	Front Side	848.8	0.081	-1.56	30.00	29.80	1.047	0.085	/
					Back Side	848.8	0.130	2.13	30.00	29.80	1.047	0.136	2
					Left Side	848.8	0.065	-2.27	30.00	29.80	1.047	0.068	/
					Right Side	848.8	0.059	-1.44	30.00	29.80	1.047	0.062	/
					Bottom Side	848.8	0.105	1.73	30.00	29.80	1.047	0.110	/
GSM1900	N/A	GPRS (GMSK, 4-Slot)	N/A	N/A	Front Side	1850.2	0.068	1.02	27.00	26.93	1.016	0.069	/
					Back Side	1850.2	0.094	-2.02	27.00	26.93	1.016	0.095	4
					Left Side	1850.2	0.055	-2.71	27.00	26.93	1.016	0.056	/
					Right Side	1850.2	0.018	2.88	27.00	26.93	1.016	0.018	/
					Top Side	1850.2	0.077	3.93	27.00	26.93	1.016	0.078	/
WCDMA Band 2	N/A	RMC	N/A	N/A	Front Side	1907.6	0.120	1.52	24.00	23.71	1.069	0.128	/
					Back Side	1907.6	0.273	-3.78	24.00	23.71	1.069	0.292	6
					Left Side	1907.6	0.157	0.52	24.00	23.71	1.069	0.168	/
					Top Side	1907.6	0.221	-2.61	24.00	23.71	1.069	0.236	/
WCDMA Band 4	N/A	RMC	N/A	N/A	Front Side	1740	0.074	1.14	24.00	23.70	1.072	0.079	/
					Back Side	1740	0.191	3.74	24.00	23.70	1.072	0.205	8
					Left Side	1740	0.106	3.44	24.00	23.70	1.072	0.114	/
					Top Side	1740	0.113	3.45	24.00	23.70	1.072	0.121	/
WCDMA Band 5	N/A	RMC	N/A	N/A	Front Side	836.6	0.035	3.27	24.00	23.53	1.114	0.039	/
					Back Side	836.6	0.126	1.64	24.00	23.53	1.114	0.140	10
					Left Side	836.6	0.062	-0.48	24.00	23.53	1.114	0.069	/
					Right Side	836.6	0.024	-0.97	24.00	23.53	1.114	0.027	/
					Bottom Side	836.6	0.087	-3.16	24.00	23.53	1.114	0.097	/
2.4G WLAN	N/A	802.11b	N/A	N/A	Front Side	2462	0.047	3.79	18.00	17.58	1.102	0.052	/
					Back Side	2462	0.090	0.24	18.00	17.58	1.102	0.099	12
					Right Side	2462	0.044	3.10	18.00	17.58	1.102	0.048	/
					Top Side	2462	0.066	-0.45	18.00	17.58	1.102	0.073	/
5.2G WLAN	N/A	802.11 n-HT20	N/A	N/A	Front Side	5240	0.143	-0.93	15.00	14.54	1.112	0.159	/
					Back Side	5240	0.280	0.69	15.00	14.54	1.112	0.311	14
					Right Side	5240	0.156	1.16	15.00	14.54	1.112	0.173	/
					Top Side	5240	0.212	-1.09	15.00	14.54	1.112	0.236	/
5.8G WLAN	N/A	802.11 n-HT20	N/A	N/A	Front Side	5825	0.094	-0.80	14.00	13.73	1.064	0.100	/
					Back Side	5825	0.183	2.82	14.00	13.73	1.064	0.195	16
					Right Side	5825	0.111	1.11	14.00	13.73	1.064	0.118	/
					Top Side	5825	0.145	1.19	14.00	13.73	1.064	0.154	/



Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 1g (W/Kg)	Power Drift(%)	Max. Turn-up Power(dBm)	Meas. Output Power(dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas.No.
LTE Band 2	20M	QPSK	1	99	Front side	1900	0.074	-3.84	25.00	24.62	1.091	0.081	/
			50	49	Front side	1900	0.062	1.76	24.00	23.62	1.091	0.068	/
			1	99	Back Side	1900	0.232	3.29	25.00	24.62	1.091	0.253	18
			50	49	Back Side	1900	0.221	0.45	24.00	23.62	1.091	0.241	/
			1	99	Left Side	1900	0.122	-1.52	25.00	24.62	1.091	0.133	/
			50	49	Left Side	1900	0.108	0.87	24.00	23.62	1.091	0.118	/
			1	99	Top Side	1900	0.167	1.91	25.00	24.62	1.091	0.182	/
LTE Band 5	10M	QPSK	1	99	Top Side	1900	0.154	1.98	24.00	23.62	1.091	0.168	/
			1	24	Front side	829	0.138	2.64	24.50	24.01	1.119	0.154	/
			25	12	Front side	844	0.121	0.07	23.50	23.00	1.122	0.136	/
			1	24	Back Side	829	0.169	0.74	24.50	24.01	1.119	0.189	20
			25	12	Back Side	844	0.148	-2.36	23.50	23.00	1.122	0.166	/
			1	24	Left Side	829	0.144	-1.12	24.50	24.01	1.119	0.161	/
			25	12	Left Side	844	0.135	1.63	23.50	23.00	1.122	0.151	/
			1	24	Right Side	829	0.031	-3.03	24.50	24.01	1.119	0.035	/
			25	12	Right Side	844	0.022	-2.09	23.50	23.00	1.122	0.025	/
			1	24	Bottom Side	829	0.145	0.55	24.50	24.01	1.119	0.162	/
LTE Band 7	10M	QPSK	1	99	Bottom Side	844	0.134	0.18	23.50	23.00	1.122	0.150	/
			1	99	Front side	2560	0.213	-2.54	25.50	25.17	1.079	0.230	/
			50	49	Front side	2560	0.178	1.05	24.50	24.04	1.112	0.198	/
			1	99	Back Side	2510	0.461	-1.64	25.50	23.91	1.442	0.665	/
			1	99	Back Side	2535	0.556	-0.55	25.50	24.48	1.265	0.703	/
			1	99	Back Side	2560	0.693	0.83	25.50	25.17	1.079	0.748	22
			50	49	Back Side	2560	0.513	0.18	24.50	24.04	1.112	0.570	/
			1	99	Left Side	2560	0.526	3.01	25.50	25.17	1.079	0.568	/
			50	49	Left Side	2560	0.627	3.14	24.50	24.04	1.112	0.697	/
			1	99	Top Side	2560	0.274	1.22	25.50	25.17	1.079	0.296	/
LTE Band 12/17	10M	QPSK	50	49	Top Side	2560	0.252	1.78	24.50	24.04	1.112	0.280	/
			1	24	Front side	711	0.056	-0.77	24.50	24.11	1.094	0.061	/
			25	0	Front side	707.5	0.047	3.38	23.50	23.05	1.109	0.052	/
			1	24	Back Side	711	0.149	-3.11	24.50	24.11	1.094	0.163	24
			25	0	Back Side	707.5	0.137	-0.61	23.50	23.05	1.109	0.152	/
			1	24	Left Side	711	0.084	3.19	24.50	24.11	1.094	0.092	/
			25	0	Left Side	707.5	0.071	-0.19	23.50	23.05	1.109	0.079	/
			1	24	Right Side	711	0.112	-1.89	24.50	24.11	1.094	0.123	/
			25	0	Right Side	707.5	0.099	-2.34	23.50	23.05	1.109	0.110	/
			1	24	Bottom Side	711	0.084	1.73	24.50	24.11	1.094	0.092	/
LTE Band 41	20M	QPSK	25	0	Bottom Side	707.5	0.075	-3.06	23.50	23.05	1.109	0.083	/
			1	49	Front side	2593	0.119	-3.18	25.50	25.03	1.114	0.133	/
			50	24	Front side	2593	0.105	1.77	25.50	25.03	1.114	0.117	/
			1	49	Back Side	2593	0.643	-2.78	25.50	25.03	1.114	0.716	26
			50	24	Back Side	2593	0.622	-1.44	25.50	25.03	1.114	0.693	/
			1	49	Left Side	2593	0.133	3.98	25.50	25.03	1.114	0.148	/
			50	24	Left Side	2593	0.12	1.31	25.50	25.03	1.114	0.134	/
			1	49	Top Side	2593	0.314	-0.13	25.50	25.03	1.114	0.350	/
LTE Band 66/4	20M	QPSK	50	24	Top Side	2593	0.287	1.35	25.50	25.03	1.114	0.320	/
			1	99	Front side	1720	0.142	2.73	25.00	24.84	1.038	0.147	/
			50	49	Front side	1720	0.133	2.46	24.00	23.78	1.052	0.140	/
			1	99	Back Side	1720	0.172	3.24	25.00	24.84	1.038	0.178	28
			50	49	Back Side	1720	0.152	2.52	24.00	23.78	1.052	0.160	/
			1	99	Left Side	1720	0.141	3.00	25.00	24.84	1.038	0.146	/
			50	49	Left Side	1720	0.136	2.16	24.00	23.78	1.052	0.143	/
			1	99	Top Side	1720	0.148	-2.94	25.00	24.84	1.038	0.154	/
			50	49	Top Side	1720	0.137	-1.63	24.00	23.78	1.052	0.144	/

Note:

- The test separation of all above table is 10mm.
- Per KDB 447498 D04, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - Scaled SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
- Per KDB 248227- When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg. (The highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power was **0.046** W/Kg for Body)
- When the user enables the personal Wireless router functions for the handsets, actual operations include simultaneous transmission of both the Wi-Fi transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. The "Portable Hotspot" feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.



12.3 Limb-worn and Hotspot SAR

Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 10g (W/Kg)	Power Drift(%)	Max. Turn-up Power(dBm)	Meas. Output Power(dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas.No.
GSM850	N/A	GPRS (GMSK, 4-Slot)	N/A	N/A	Front Side	848.8	0.346	-0.40	30.00	29.80	1.047	0.362	/
					Back Side	848.8	0.407	1.03	30.00	29.80	1.047	0.426	29
					Left Side	848.8	0.256	-2.55	30.00	29.80	1.047	0.268	/
					Right Side	848.8	0.237	-0.46	30.00	29.80	1.047	0.248	/
					Top Side	848.8	0.161	3.00	30.00	29.80	1.047	0.169	/
					Bottom Side	848.8	0.293	3.40	30.00	29.80	1.047	0.307	/
GSM1900	N/A	GPRS (GMSK, 4-Slot)	N/A	N/A	Front Side	1850.2	0.454	-1.58	27.00	26.93	1.016	0.461	/
					Back Side	1850.2	0.595	3.54	27.00	26.93	1.016	0.605	30
					Left Side	1850.2	0.365	-3.93	27.00	26.93	1.016	0.371	/
					Right Side	1850.2	0.334	0.16	27.00	26.93	1.016	0.339	/
					Top Side	1850.2	0.187	-1.54	27.00	26.93	1.016	0.190	/
					Bottom Side	1850.2	0.421	-0.73	27.00	26.93	1.016	0.428	/
WCDMA Band 2	N/A	RMC	N/A	N/A	Front Side	1907.6	0.716	-3.23	24.00	23.71	1.069	0.765	/
					Back Side	1907.6	1.731	2.18	24.00	23.71	1.069	1.851	31
					Left Side	1907.6	0.866	2.76	24.00	23.71	1.069	0.926	/
WCDMA Band 4	N/A	RMC	N/A	N/A	Top Side	1907.6	1.217	1.31	24.00	23.71	1.069	1.301	/
					Front Side	1740	0.113	3.61	24.00	23.70	1.072	0.121	/
					Back Side	1740	0.220	-1.43	24.00	23.70	1.072	0.236	32
					Left Side	1740	0.075	-0.72	24.00	23.70	1.072	0.080	/
					Top Side	1740	0.064	-0.45	24.00	23.70	1.072	0.069	/
WCDMA Band 5	N/A	RMC	N/A	N/A	Front Side	836.6	0.251	3.41	24.00	23.53	1.114	0.280	/
					Back Side	836.6	0.372	-2.69	24.00	23.53	1.114	0.415	33
					Left Side	836.6	0.117	0.33	24.00	23.53	1.114	0.130	/
					Right Side	836.6	0.102	2.81	24.00	23.53	1.114	0.114	/
					Bottom Side	836.6	0.210	-1.53	24.00	23.53	1.114	0.234	/
2.4G WLAN	N/A	802.11b	N/A	N/A	Front Side	2462	0.088	1.57	18.00	17.58	1.102	0.097	/
					Back Side	2462	0.097	3.05	18.00	17.58	1.102	0.107	34
					Right Side	2462	0.046	3.72	18.00	17.58	1.102	0.051	/
					Top Side	2462	0.079	-1.38	18.00	17.58	1.102	0.087	/
5.2G WLAN	N/A	802.11 n-HT20	N/A	N/A	Front Side	5240	0.296	0.53	15.00	14.54	1.112	0.329	/
					Back Side	5240	0.374	3.68	15.00	14.54	1.112	0.416	35
					Right Side	5240	0.181	0.98	15.00	14.54	1.112	0.201	/
					Top Side	5240	0.157	1.04	15.00	14.54	1.112	0.175	/
5.8G WLAN	N/A	802.11 n-HT20	N/A	N/A	Front Side	5825	0.313	-2.66	14.00	13.73	1.064	0.333	/
					Back Side	5825	0.392	-2.63	14.00	13.73	1.064	0.417	36
					Right Side	5825	0.252	0.43	14.00	13.73	1.064	0.268	/
					Top Side	5825	0.217	-2.31	14.00	13.73	1.064	0.231	/



Band	BW (MHz)	Mod.	RB Size	RB offset	Test Position	Freq.	Result 10g (W/Kg)	Power Drift(%)	Max. Turn-up Power(dBm)	Meas. Output Power(dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas.No.
LTE Band 2	20M	QPSK	1	99	Front side	1900	0.961	1.05	25.00	24.62	1.091	1.049	/
			50	49	Front side	1900	0.929	-0.97	24.00	23.62	1.091	1.014	/
			1	99	Back Side	1900	1.323	1.70	25.00	24.62	1.091	1.444	37
			50	49	Back Side	1900	1.153	-3.47	24.00	23.62	1.091	1.258	/
			1	99	Left Side	1900	0.756	-2.32	25.00	24.62	1.091	0.825	/
			50	49	Left Side	1900	0.717	-0.96	24.00	23.62	1.091	0.783	/
			1	99	Top Side	1900	0.648	-2.33	25.00	24.62	1.091	0.707	/
LTE Band 5	10M	QPSK	50	49	Top Side	1900	0.656	0.87	24.00	23.62	1.091	0.716	/
			1	24	Front side	829	0.778	-3.60	24.50	24.01	1.119	0.871	/
			25	12	Front side	844	0.751	3.74	23.50	23.00	1.122	0.843	/
			1	24	Back Side	829	0.925	2.48	24.50	24.01	1.119	1.035	38
			25	12	Back Side	844	0.844	3.92	23.50	23.00	1.122	0.947	/
			1	24	Left Side	829	0.659	-0.03	24.50	24.01	1.119	0.738	/
			25	12	Left Side	844	0.631	2.97	23.50	23.00	1.122	0.708	/
LTE Band 7	10M	QPSK	1	24	Right Side	829	0.648	1.12	24.50	24.01	1.119	0.725	/
			25	12	Right Side	844	0.629	-1.38	23.50	23.00	1.122	0.706	/
			1	24	Bottom Side	829	0.802	-2.84	24.50	24.01	1.119	0.898	/
			25	12	Bottom Side	844	0.763	-0.29	23.50	23.00	1.122	0.856	/
			1	99	Front side	2560	0.565	-2.37	25.50	25.17	1.079	0.610	/
			50	49	Front side	2560	0.519	-0.49	24.50	24.04	1.112	0.577	/
			1	99	Back Side	2560	0.933	2.91	25.50	25.17	1.079	1.007	39
LTE Band 12/17	10M	QPSK	50	49	Back Side	2560	0.861	2.54	24.50	24.04	1.112	0.957	/
			1	99	Left Side	2560	0.647	-1.25	25.50	25.17	1.079	0.698	/
			50	49	Left Side	2560	0.569	0.15	24.50	24.04	1.112	0.633	/
			1	99	Top Side	2560	0.518	-0.63	25.50	25.17	1.079	0.559	/
			50	49	Top Side	2560	0.486	1.51	24.50	24.04	1.112	0.540	/
			1	24	Front side	711	0.325	2.53	24.50	24.11	1.094	0.356	/
			25	0	Front side	707.5	0.311	-1.00	23.50	23.05	1.109	0.345	/
LTE Band 41	20M	QPSK	1	24	Back Side	711	0.445	1.32	24.50	24.11	1.094	0.487	40
			25	0	Back Side	707.5	0.423	1.19	23.50	23.05	1.109	0.469	/
			1	24	Left Side	711	0.289	3.69	24.50	24.11	1.094	0.316	/
			25	0	Left Side	707.5	0.261	-3.12	23.50	23.05	1.109	0.289	/
			1	24	Right Side	711	0.305	3.34	24.50	24.11	1.094	0.334	/
			25	0	Right Side	707.5	0.291	-1.96	23.50	23.05	1.109	0.323	/
			1	24	Bottom Side	711	0.264	-0.02	24.50	24.11	1.094	0.289	/
LTE Band 66/4	20M	QPSK	25	0	Bottom Side	707.5	0.255	1.94	23.50	23.05	1.109	0.283	/
			1	49	Front side	2593	0.441	-2.91	25.50	25.03	1.114	0.491	/
			50	24	Front side	2593	0.430	0.97	25.50	25.03	1.114	0.479	/
			1	49	Back Side	2593	0.566	-1.03	25.50	25.03	1.114	0.631	41
			50	24	Back Side	2593	0.528	3.17	25.50	25.03	1.114	0.588	/
			1	49	Left Side	2593	0.321	2.60	25.50	25.03	1.114	0.358	/
			50	24	Left Side	2593	0.284	-1.63	25.50	25.03	1.114	0.316	/
LTE Band 66/4	20M	QPSK	1	49	Top Side	2593	0.463	-3.80	25.50	25.03	1.114	0.516	/
			50	24	Top Side	2593	0.455	-1.10	25.50	25.03	1.114	0.507	/
			1	99	Front side	1720	0.356	3.21	25.00	24.84	1.038	0.369	/
			50	49	Front side	1720	0.321	3.85	24.00	23.78	1.052	0.338	/
			1	99	Back Side	1720	0.416	1.92	25.00	24.84	1.038	0.432	42
			50	49	Back Side	1720	0.356	1.57	24.00	23.78	1.052	0.374	/
			1	99	Left Side	1720	0.266	2.99	25.00	24.84	1.038	0.276	/
LTE Band 66/4	20M	QPSK	50	49	Left Side	1720	0.241	-0.90	24.00	23.78	1.052	0.254	/
			1	99	Top Side	1720	0.375	2.69	25.00	24.84	1.038	0.389	/
			50	49	Top Side	1720	0.358	-3.50	24.00	23.78	1.052	0.377	/

Note:

- The test separation of all above table is 0mm.
- Per KDB 447498 D04, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - Scaled SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
- When the user enables the personal Wireless router functions for the handsets, actual operations include simultaneous transmission of both the Wi-Fi transmitting frequency and thus cannot be evaluated for SAR under actual use conditions. The "Portable Hotspot" feature on the handset was NOT activated, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal.



12.4 Simultaneous Multi-band Transmission Evaluation

Application Simultaneous Transmission information:

Position	Simultaneous State
Head	1. GSM + 2.4GHz WLAN/5G WLAN
	2. GSM + Bluetooth
	3. WCDMA + 2.4GHz WLAN/5G WLAN
	4. WCDMA + Bluetooth
	5. LTE + 2.4GHz WLAN/5G WLAN
	6. LTE + Bluetooth
Body	1. GSM + 2.4GHz WLAN/5G WLAN
	2. GSM + Bluetooth
	3. WCDMA + 2.4GHz WLAN/5G WLAN
	4. WCDMA + Bluetooth
	5. LTE + 2.4GHz WLAN/5G WLAN
	6. LTE + Bluetooth
	1. GSM + 2.4GHz WLAN/5G WLAN
	2. GSM + Bluetooth
	3. WCDMA + 2.4GHz WLAN/5G WLAN
	4. WCDMA + Bluetooth
	5. LTE + 2.4GHz WLAN/5G WLAN
	6. LTE + Bluetooth

NOTE:

1. Bluetooth and WLAN can't simultaneous transmission at the same time.
2. For simultaneous transmission at head and body exposure position, 2 transmitters simultaneous transmission was the worst state.
3. If the test separation distance is <5mm, 5mm is used for excluded SAR calculation.
4. KDB 447498 / 4.3.2 (2) when standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion: a) (max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[√f (GHz) /x] W/kg for test separation distances≤ 50 mm; Where x = 7.5 for 1-g SAR, and x = 18.75 for 10-g SAR. b) 0.4W/Kg for 1-g SAR and 1.0W/Kg for 10-g SAR, when the separation distance is >50mm.

Estimated SAR		Maximum Average Power		Dis.	Frequency(GHz)	Stand alone SAR(1g) [W/kg]
		dBm	mW			
BT	Head	3.07	2.028	5	2.402	0.084
	Body			10	2.402	0.017
	Limb			5	2.402	0.084



Estimated SAR		Maximum Average Power		Dis.	Frequency(GHz)	Stand alone SAR(1g) [W/kg]
		dBm	mW			
NFC	Head	-43.11	1.702	5	0.01356	0.000
	Body			10	0.01356	0.000
	Limb			5	0.01356	0.000

Simultaneous Mode	Position	Mode	Max. 1-g SAR	1-g Sum SAR
			(W/kg)	(W/kg)
GSM + 2.4G WLAN	Head	GSM	0.182	0.217
		2.4G WLAN	0.035	
	Body	GSM	0.136	0.235
		2.4G WLAN	0.099	
	Limb	GSM	0.605	0.712
		2.4G WLAN	0.107	
GSM + Bluetooth	Head	GSM	0.182	0.266
		Bluetooth	0.084	
	Body	GSM	0.136	0.153
		Bluetooth	0.017	
	Limb	GSM	0.605	0.689
		Bluetooth	0.084	
GSM + 5G WLAN	Head	GSM	0.182	0.451
		5G WLAN	0.269	
	Body	GSM	0.136	0.447
		5G WLAN	0.311	
	Limb	GSM	0.605	1.022
		5G WLAN	0.417	
WCDMA + 2.4G WLAN	Head	WCDMA	0.738	0.773
		2.4G WLAN	0.035	
	Body	WCDMA	0.292	0.391
		2.4G WLAN	0.099	
	Limb	WCDMA	1.851	1.958
		2.4G WLAN	0.107	
WCDMA + Bluetooth	Head	WCDMA	0.738	0.822
		Bluetooth	0.084	
	Body	WCDMA	0.292	0.309
		Bluetooth	0.017	



	Limb	WCDMA	1.851	1.935
		Bluetooth	0.084	
WCDMA + 5G WLAN	Head	WCDMA	0.738	1.007
		5G WLAN	0.269	
	Body	WCDMA	0.292	0.603
		5G WLAN	0.311	
	Limb	WCDMA	1.851	2.268
		5G WLAN	0.417	
LTE + 2.4G WLAN	Head	LTE	0.637	0.672
		2.4G WLAN	0.035	
	Body	LTE	0.748	0.847
		2.4G WLAN	0.099	
	Limb	LTE	1.444	1.551
		2.4G WLAN	0.107	
LTE + Bluetooth	Head	LTE	0.637	0.721
		Bluetooth	0.084	
	Body	LTE	0.748	0.765
		Bluetooth	0.017	
	Limb	LTE	1.444	1.528
		Bluetooth	0.084	
LTE + 5G WLAN	Head	LTE	0.637	0.906
		5G WLAN	0.269	
	Body	LTE	0.748	1.059
		5G WLAN	0.311	
	Limb	LTE	1.444	1.861
		5G WLAN	0.417	

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna.

When the sum of SAR 1g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR-1g 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR 1g is greater than the SAR limit (SAR-1g 1.6 W/kg), SAR test exclusion is determined by the SPLSR.



13. Equipment List

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
SAR Test System	SATIMO	N/A	V5.3.15.11	N/A	N/A
750MHz Dipole	MVG	SID750	SN 30/14 DIP0G750-331	2023.07.04	2026.07.03
835MHz Dipole	MVG	SID835	SN 30/14 DIP0G835-332	2023.07.04	2026.07.03
1800MHz Dipole	MVG	SID1800	5023-DIP1G800-747	2023.12.20	2026.12.19
1900MHz Dipole	MVG	SID1900	SN 30/14 DIP1G900-333	2023.09.14	2026.09.13
2450MHz Dipole	MVG	SID2450	SN 30/14 DIP2G450-335	2023.07.04	2026.07.03
2600MHz Dipole	MVG	SID2600	SN 30/14 DIP2G600-336	2023.07.04	2026.07.03
Waveguide	MVG	SWG5500	SN 13/14 WGA32	2023.07.04	2026.07.03
E-Field Probe	MVG	SSE2	SN 08/21 EPG0352	2025.09.15	2026.09.14
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2025.09.15	2026.09.14
Antenna	MVG	ANTA3	SN 07/13 ZNTA52	N/A	N/A
Phantom1	MVG	SAM	SN 32/14 SAM115	N/A	N/A
Phantom3	MVG	SAM	SN 21/21 ELLI48	N/A	N/A
Phone holder	MVG	N/A	SN 32/14 MSH97	N/A	N/A
Laptop holder	MVG	N/A	SN 32/14 LSH29	N/A	N/A
Attenuator	Agilent	HXT-10-8-SMA	240327017	2026.02.04	2027.02.03
Directional coupler	Xi'an Xingbo	XBOH-OA08-20dB	211123-4-3	2026.02.03	2027.02.02
Network Analyzer	Agilent	E5071C	MY46520378	2025-09-26	2026-09-24
Multi Meter	Keithley	Multi Meter 2000	4050073	2025-09-22	2026-09-21
Signal Generator	Agilent	N5182A	MY50140530	2025-09-26	2026-09-25
Wireless Communication Test Set	Agilent	8960-E5515C	MY48360751	2026.02.04	2027.02.03
Wireless Communication Test Set	R&S	CMW500	156324	2025-09-25	2026-09-24
Power Amplifier	DESAY	WCS-DLNA50M8G50G1	CSKJLNA231227A	2025-09-29	2026-09-28
Power Meter	R&S	NRP	100510	2025-09-25	2026-09-24
Power Sensor	R&S	NRP-Z11	101919	2025-09-25	2026-09-24
Power Sensor	Keysight	U2021XA	MY56280002	2025-09-25	2026-09-24
Temperature hygrometer	TOPRIE	TP502V4-P	6700000124198	2025.10.09	2026.10.08
Thermograph	Elitech	RC-4	S/N EF7176501537	2025.10.17	2026.10.16



Appendix A. System Validation Plots

System Performance Check Data (750MHz)

Type: Phone measurement (Complete)

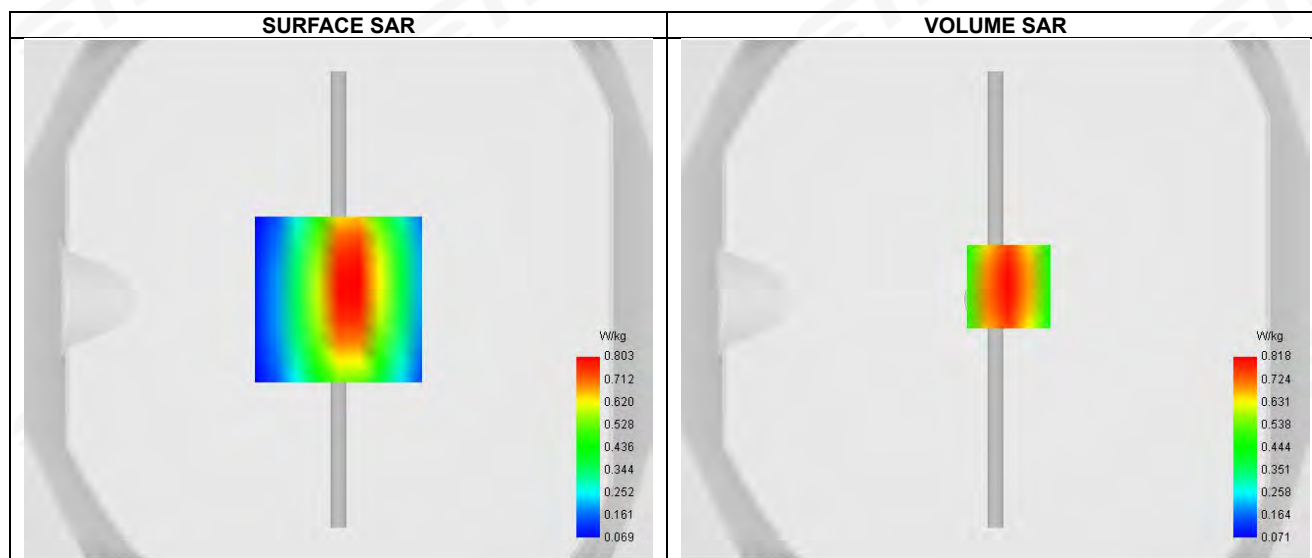
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2026-02-23

Experimental conditions

Phantom	Validation plane
Device Position	Dipole
Band	750MHz
Channels	Middle
Signal	CW
Frequency (MHz)	750MHz
Relative permittivity	42.65
Conductivity (S/m)	0.91
Probe	SN 08/21 EPG0352
ConvF	1.51
Crest factor	1:1



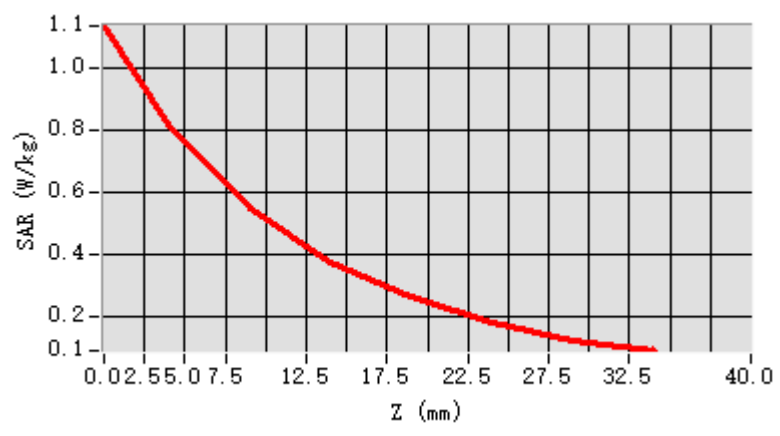
Maximum location: X=5.00, Y=5.00 ; SAR Peak: 1.13 W/kg

D. SAR 1g & 10g

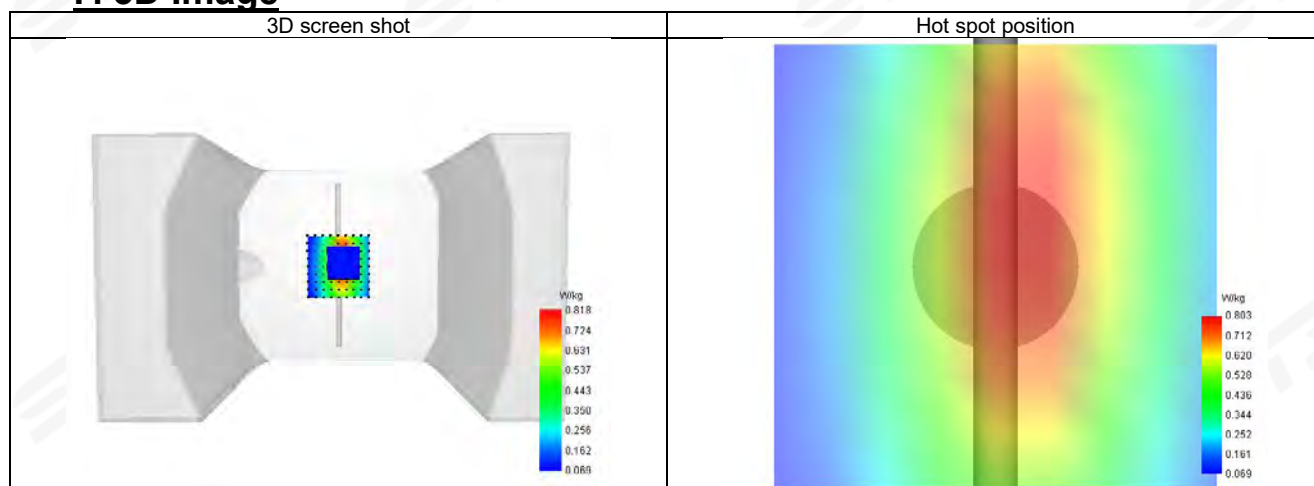
SAR 10g (W/Kg)	0.540
SAR 1g (W/Kg)	0.894
Horizontal validation criteria: minimum distance (mm)	11.334451
Vertical validation criteria: SAR ratio M2/M1 (%)	67.359413

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.135	0.818	0.551	0.377	0.266	0.184	0.127



F. 3D Image



**System Performance Check Data (835MHz)**

Type: Phone measurement (Complete)

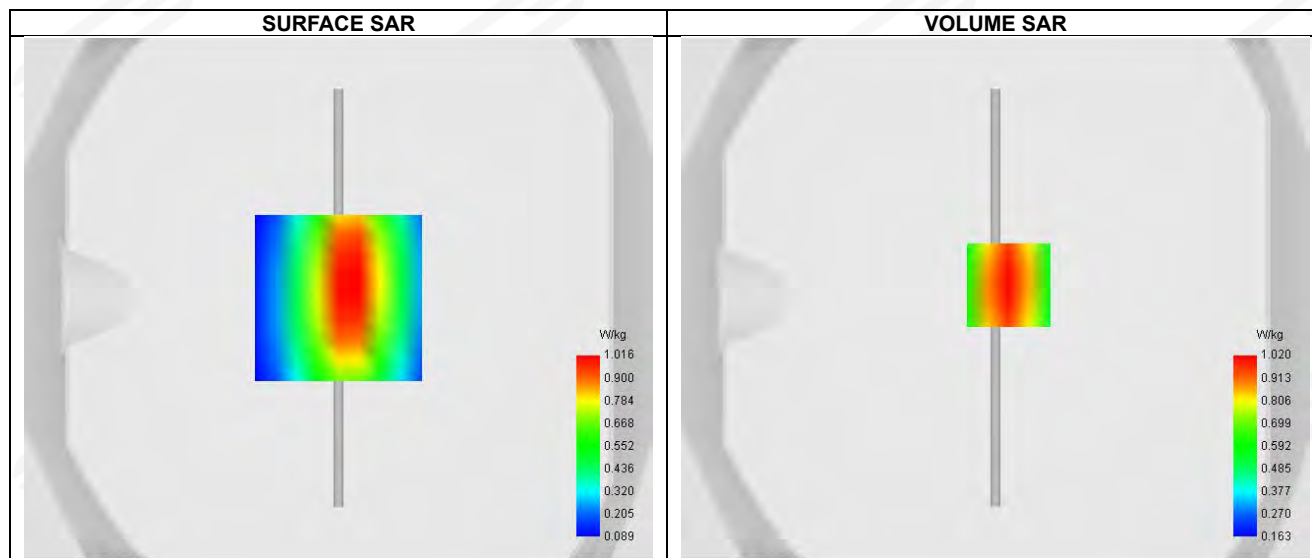
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2026-02-24

Experimental conditions

Phantom	Validation plane
Device Position	Dipole
Band	835MHz
Channels	Middle
Signal	CW
Frequency (MHz)	835MHz
Relative permittivity	41.14
Conductivity (S/m)	0.88
Probe	SN 08/21 EPGO352
ConvF	1.49
Crest factor:	1:1



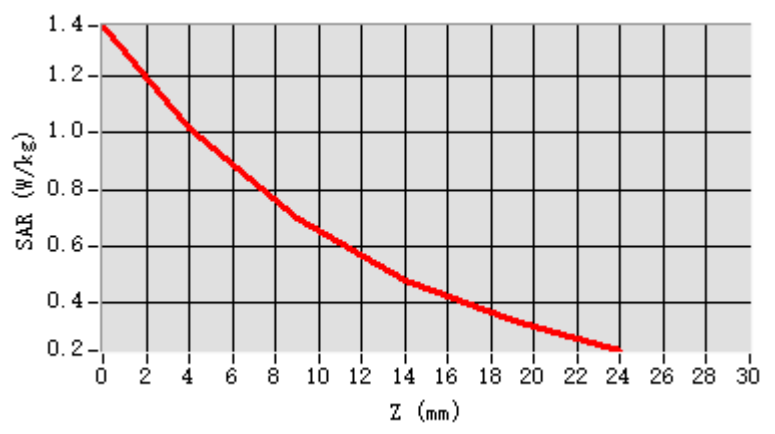
Maximum location: X=5.00, Y=5.00 ; SAR Peak: 1.38 W/kg

D. SAR 1g & 10g

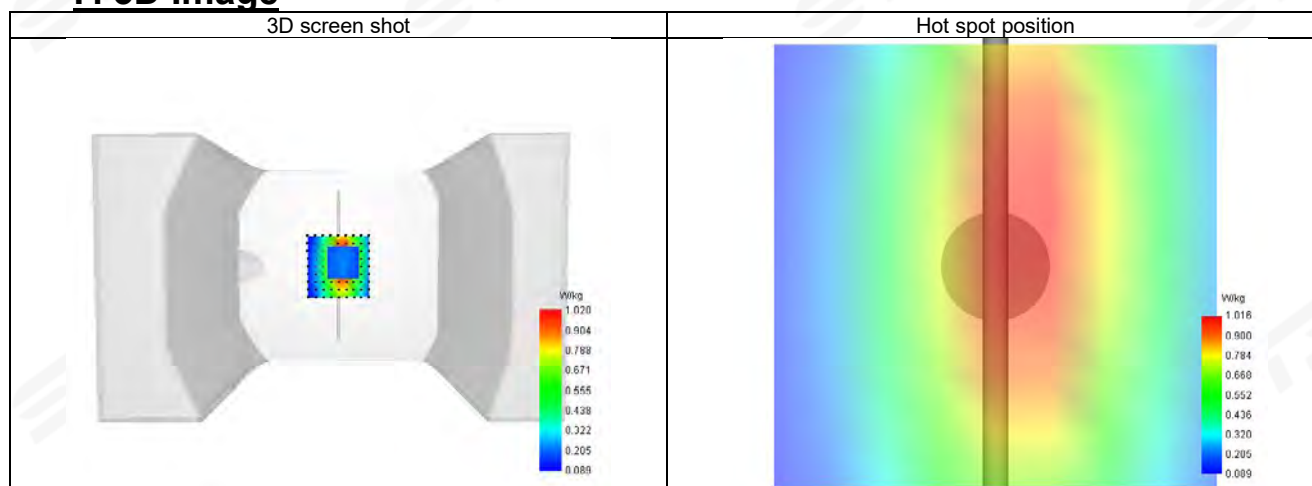
SAR 10g (W/Kg)	0.613
SAR 1g (W/Kg)	0.990
Horizontal validation criteria: minimum distance (mm)	11.262241
Vertical validation criteria: SAR ratio M2/M1 (%)	68.333333

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00
SAR (W/Kg)	1.379	1.020	0.697	0.481	0.337



F. 3D Image



**System Performance Check Data(1800MHz)**

Type: Phone measurement (Complete)

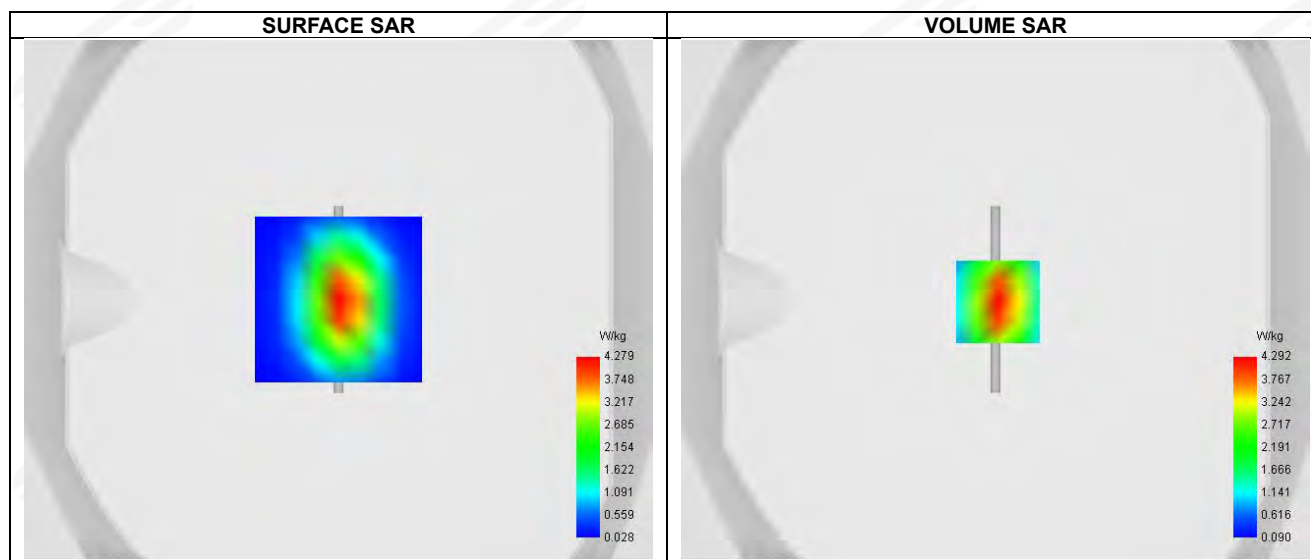
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2026-02-25

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	1800MHz
Channels	Middle
Signal	CW
Frequency (MHz)	1800MHz
Relative permittivity	40.88
Conductivity (S/m)	1.39
Probe	SN 08/21 EPGO352
ConvF	1.54
Crest factor:	1:1



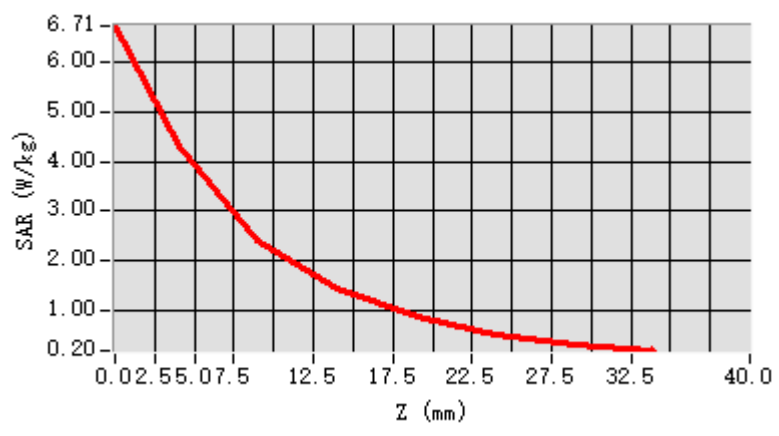
Maximum location: X=1.00, Y=-1.00 ; SAR Peak: 6.66 W/kg

D. SAR 1g & 10g

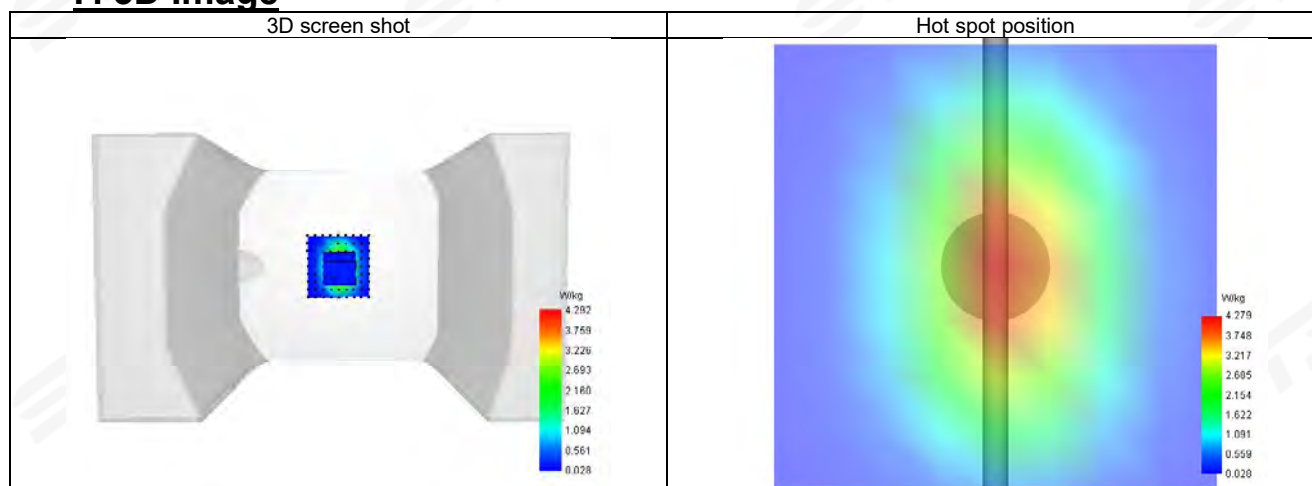
SAR 10g (W/Kg)	2.053
SAR 1g (W/Kg)	3.812
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	56.649833

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.715	4.292	2.432	1.431	0.869	0.513	0.303



F. 3D Image



**System Performance Check Data (1900MHz)**

Type: Phone measurement (Complete)

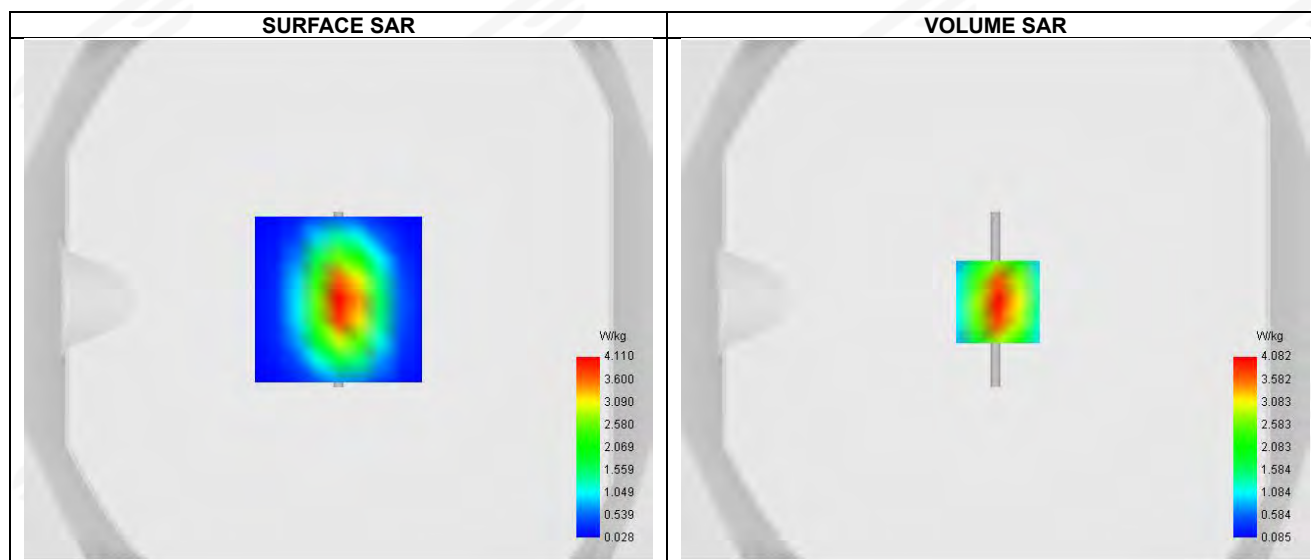
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2026-02-27

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	1900MHz
Channels	Middle
Signal	CW
Frequency (MHz)	1900MHz
Relative permittivity	41.09
Conductivity (S/m)	1.41
Probe	SN 08/21 EPGO352
ConvF	1.73
Crest factor:	1:1



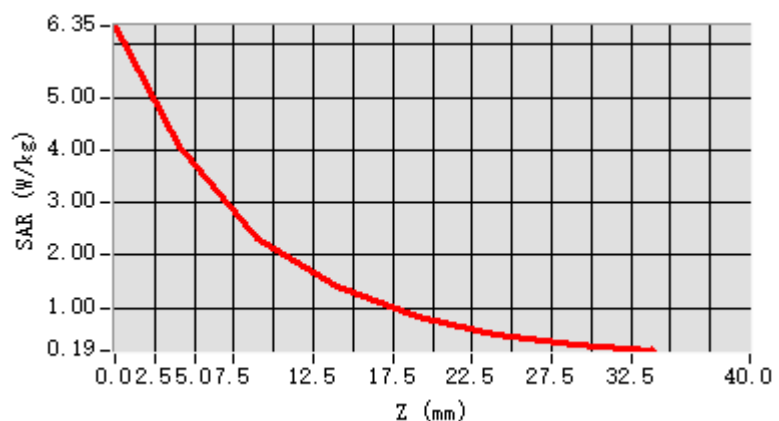
Maximum location: X=1.00, Y=-1.00 ; SAR Peak: 6.30 W/kg

D. SAR 1g & 10g

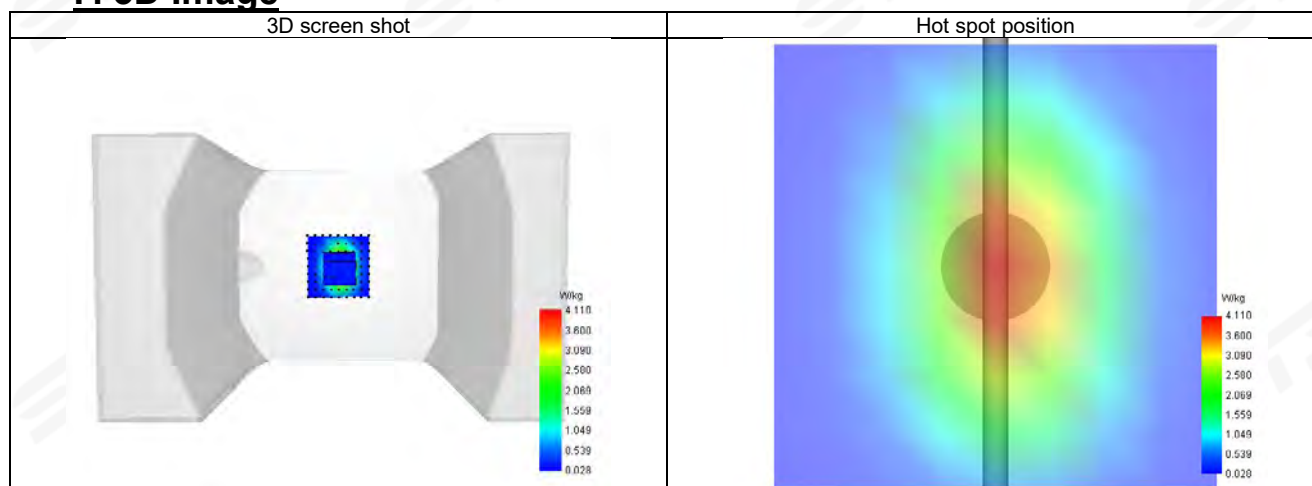
SAR 10g (W/Kg)	2.012
SAR 1g (W/Kg)	3.949
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	56.847236

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.353	4.082	2.320	1.423	0.847	0.504	0.300



F. 3D Image



**System Performance Check Data (2450MHz)**

Type: Phone measurement (Complete)

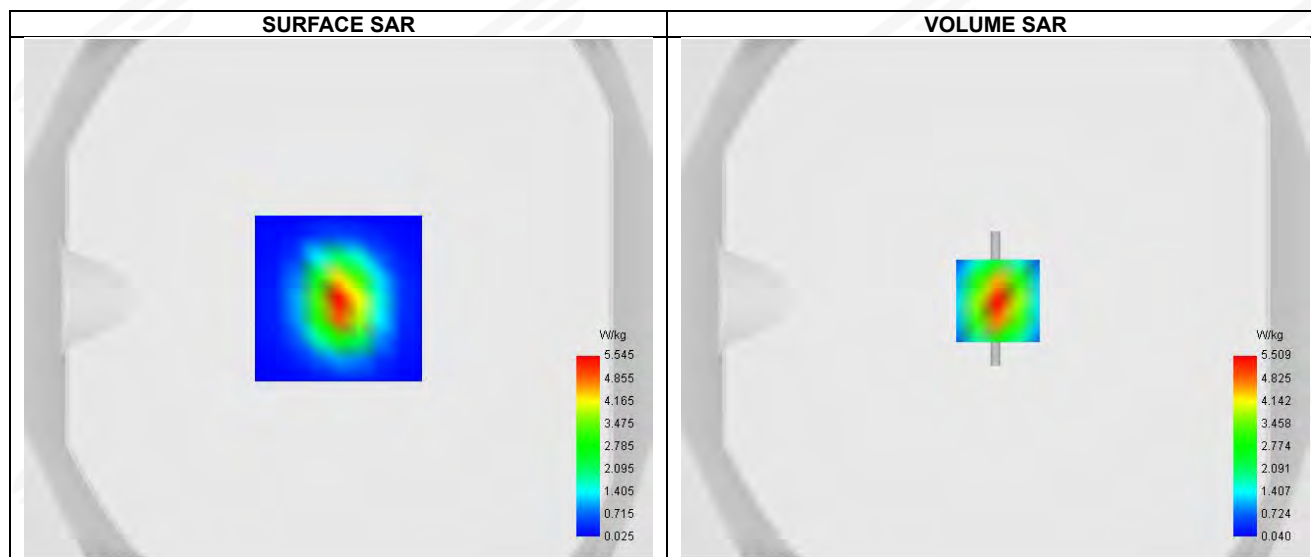
Area scan resolution: dx=8mm, dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2026-02-28

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	2450MHz
Channels	Middle
Signal	CW
Frequency (MHz)	2450
Relative permittivity	39.39
Conductivity (S/m)	1.78
Probe	SN 08/21 EPG0352
ConvF	1.82
Crest factor:	1:1



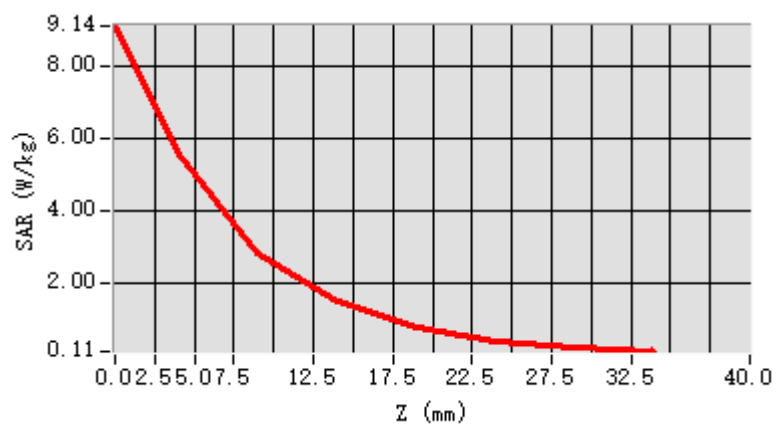
Maximum location: X=1.00, Y=-1.00 ; SAR Peak: 9.02 W/kg

D. SAR 1g & 10g

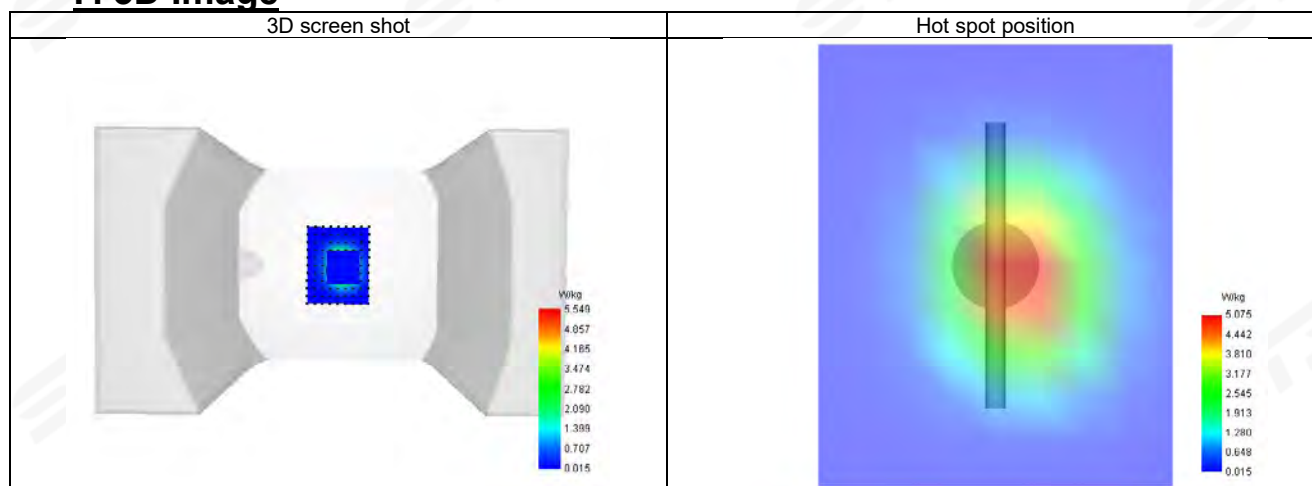
SAR 10g (W/Kg)	2.373
SAR 1g (W/Kg)	5.427
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	51.056495

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.138	5.549	2.842	1.493	0.776	0.404	0.210



F. 3D Image



**System Performance Check Data(2600MHz)**

Type: Phone measurement (Complete)

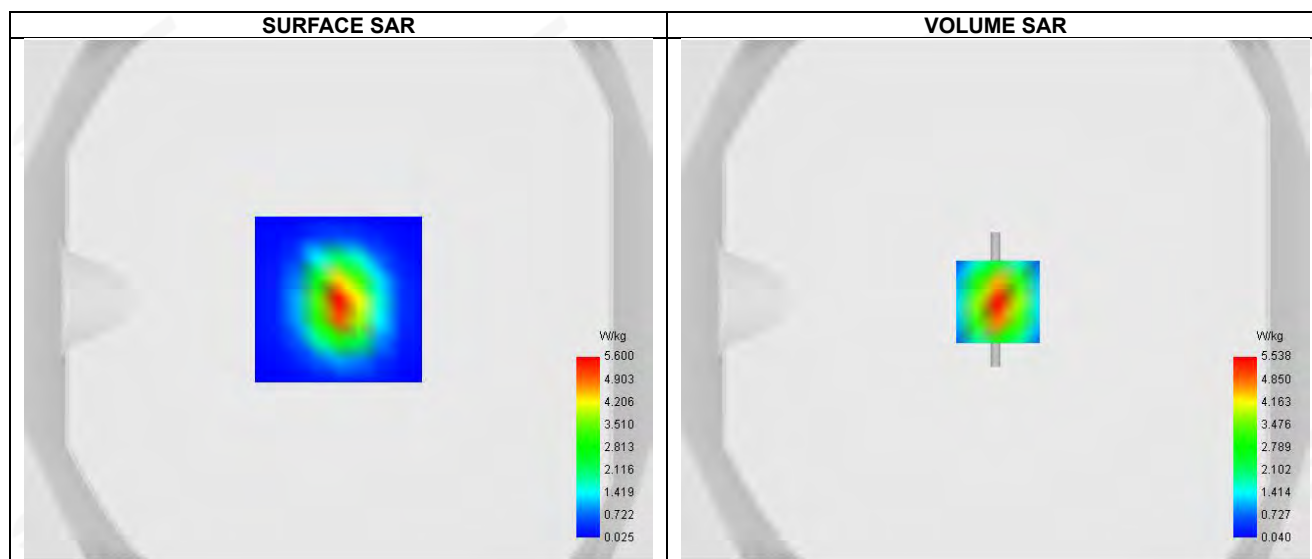
Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=8mm, dy=8mm, dz=5mm

Date of measurement: 2026-02-27

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	2600MHz
Channels	Middle
Signal	CW
Frequency (MHz)	2600
Relative permittivity	39.07
Conductivity (S/m)	1.99
Probe	SN 08/21 EPGO352
ConvF	1.70
Crest factor:	1:1



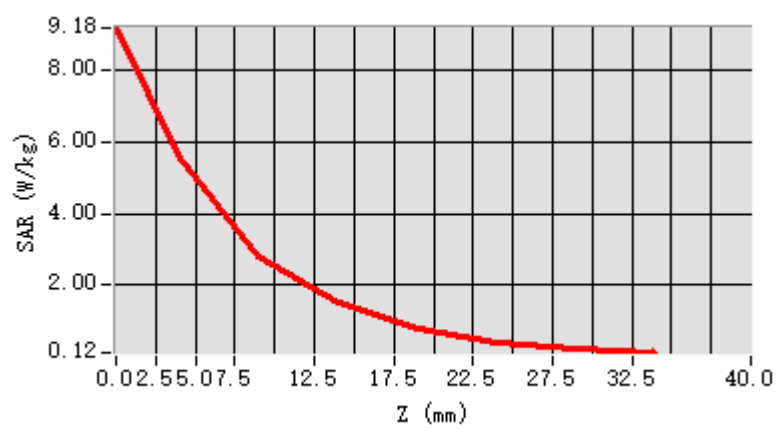
Maximum location: X=1.00, Y=-1.00 ; SAR Peak: 9.08 W/kg

D. SAR 1g & 10g

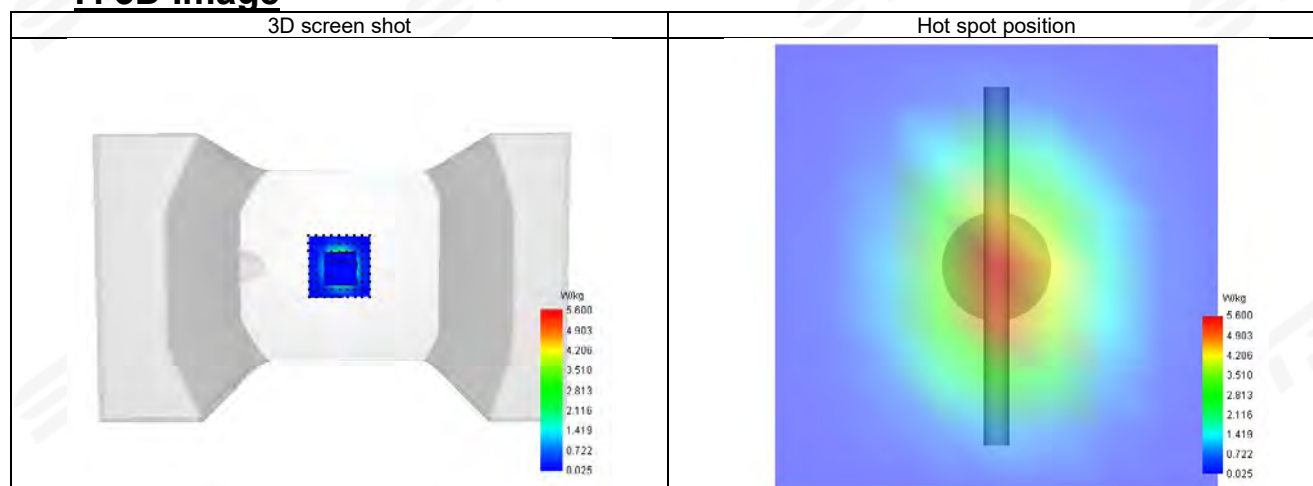
SAR 10g (W/Kg)	2.448
SAR 1g (W/Kg)	5.586
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	50.940473

E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.177	5.538	2.821	1.514	0.795	0.418	0.219



F. 3D Image



**System Performance Check Data (5200MHz)**

Type: Dipole measurement (Complete)

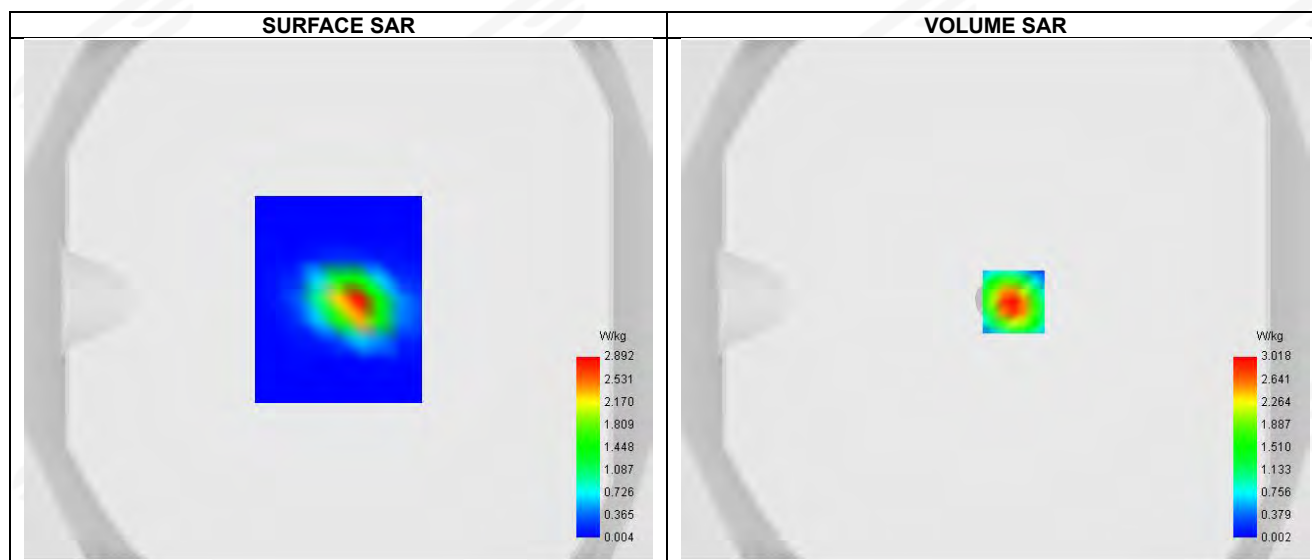
Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2026-02-28

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	5200MHz
Channels	Middle
Signal	CW
Frequency (MHz)	5200
Relative permittivity	35.79
Conductivity (S/m)	4.67
Probe	SN 08/21 EPGO352
ConvF	1.37
Crest factor:	1:1



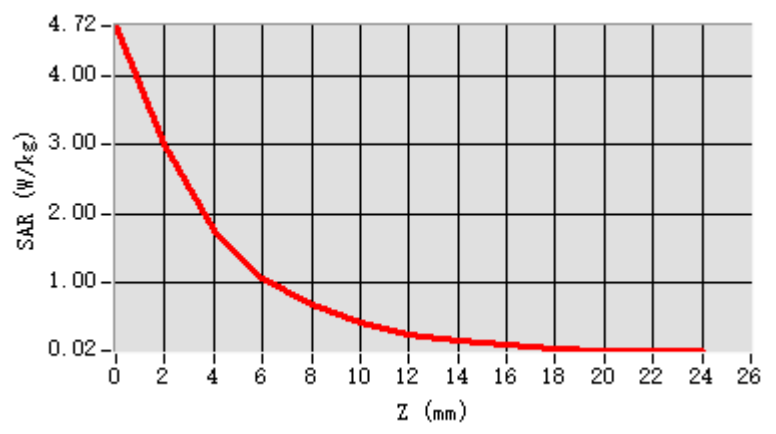
Maximum location: X=7.00, Y=-1.00 ; SAR Peak: 4.97 W/kg

D. SAR 1g & 10g

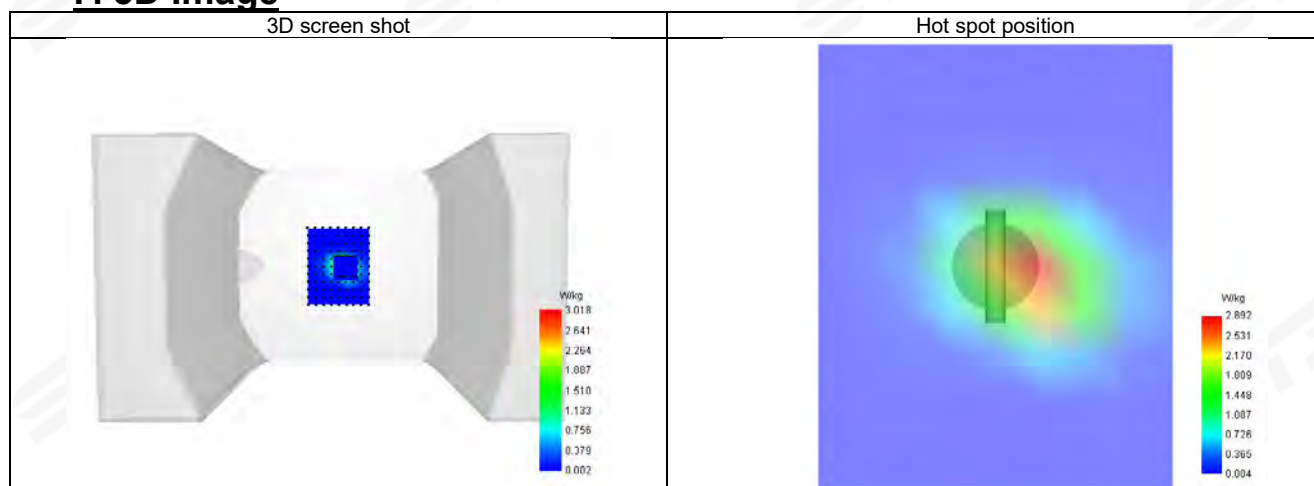
SAR 10g (W/Kg)	0.596
SAR 1g (W/Kg)	1.588
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	58.757221

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
SAR (W/Kg)	4.719	3.018	1.773	1.057	0.679	0.416	0.255	0.156	0.096	0.059	0.036	0.022	0.012



F. 3D Image



**System Performance Check Data (5800MHz)**

Type: Dipole measurement (Complete)

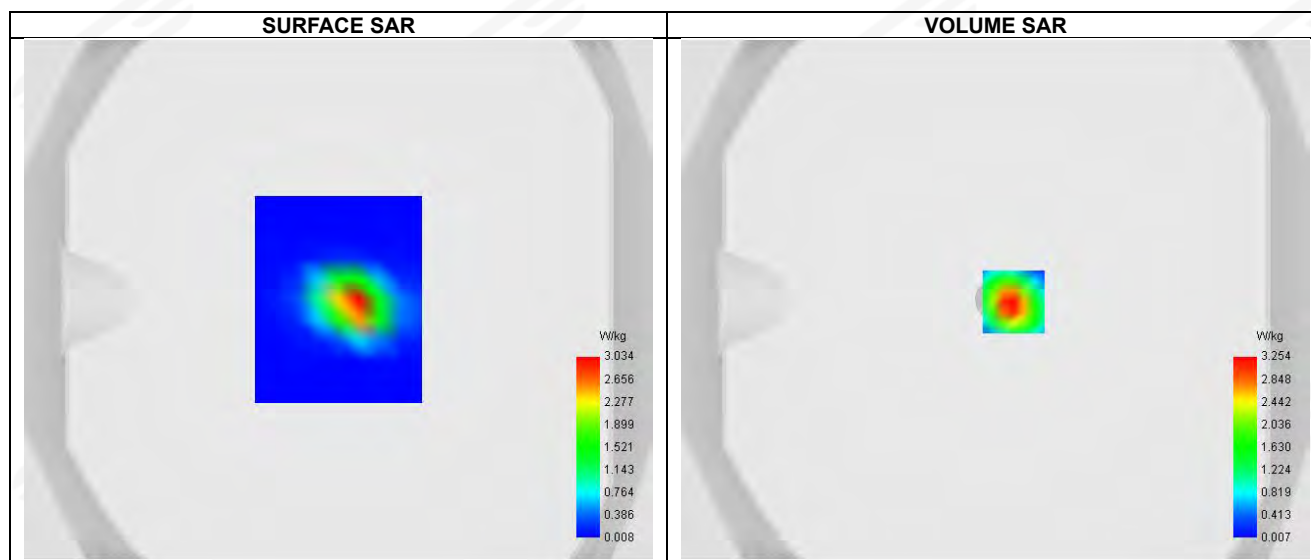
Area scan resolution: dx=8mm,dy=8mm

Zoom scan resolution: dx=4mm, dy=4mm, dz=2mm

Date of measurement: 2026-02-28

Experimental conditions.

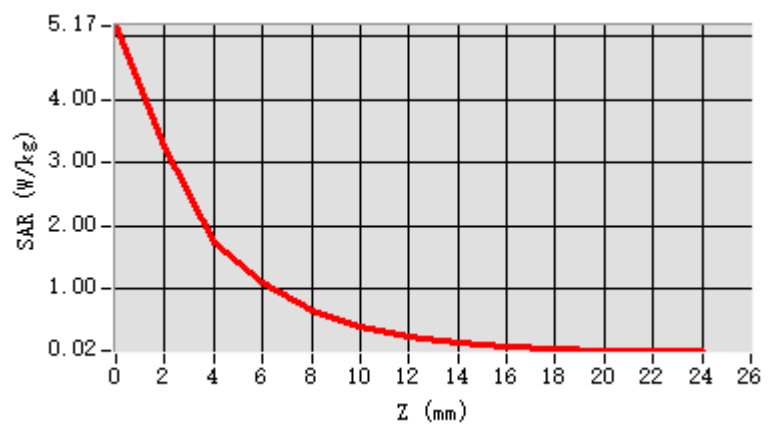
Phantom	Validation plane
Device Position	Dipole
Band	5800MHz
Channels	Middle
Signal	CW
Frequency (MHz)	5800
Relative permittivity	35.80
Conductivity (S/m)	5.26
Probe	SN 08/21 EPGO352
ConvF	1.32
Crest factor:	1:1

**D. SAR 1g & 10g**

SAR 10g (W/Kg)	0.683
SAR 1g (W/Kg)	1.846
Horizontal validation criteria: minimum distance (mm)	8.944272
Vertical validation criteria: SAR ratio M2/M1 (%)	53.234795

E. Z Axis Scan

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
SAR (W/Kg)	5.167	3.254	1.732	1.111	0.661	0.394	0.234	0.139	0.083	0.049	0.029	0.017	0.017



F. 3D Image

